

TANGYES LIMITED, BIRMINGHAM.

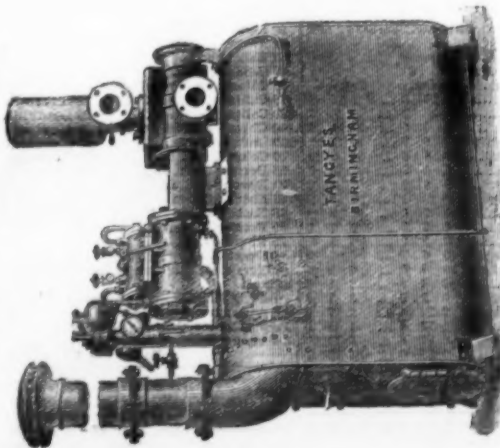
LONDON: 35, Queen Victoria Street.

NEWCASTLE: St. Nicholas Buildings.

MANCHESTER: Deansgate.

GLASGOW: Argyle and Hope Streets.

THE "SPECIAL" STEAM PUMP, WITH "COLONIAL" TUBULAR BOILER.



This arrangement can be mounted on wheels at an extra price.
The Spark Catcher shown in illustration is not included in price,
nor supplied unless specially ordered

56

THE "SPECIAL" RAM PUMP AND BOILER FEEDER.

Cameron and Floyd's Patents. TANGYES LIMITED, Sole Makers.



This Pump is specially suited for feeding quick-steaming Boilers.
It may be relied upon to work down to a speed of one stroke per minute, and
enable the supply of feed-water to be adjusted to the evaporation.
The Pump has gun-metal Ram, Valve, and Seats.

Size	No.	1	2	3	4	5
Diam. Steam Cylinder	ins.	2 1/2	3	4	5	6
Diam. Ram	ins.	1 1/2	2	3	4	5
Length Stroke	ins.	6	8	10	12	14
Gallons per hour		210	360	540	810	1080
Price		20	30	40	50	60
To Feed H.P. Boiler		14	24	40	68	98
Diam. Steam Inlet	ins.	1 1/2	2	3	4	5
Exhaust Outlet	ins.	1 1/2	2	3	4	5
Suction and Delivery	ins.	1 1/2	2	3	4	5
Overall Dimensions	ins.	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2
Weight	cwt.	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2

If with solid Brass Water Cylinder with Copper Air Vessel: extra.

76

THE "SPECIAL" STEAM PUMP, WITH "COLONIAL" TUBULAR BOILER.

Nominal H.P. of Boiler	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																	
Diam. Steam Cyl.	ins.	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138	140	142	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200																																																																																																		
Diam. Water Cyl.	ins.	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138	140	142	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200																																																																																															
Length Stroke	ins.	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138	140	142	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200																																																																																															
Price "Special" & Boiler with Feed Pump	£	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200																																																																																															
Galls. per hour, approx.		210	360	540	810	1080	1350	1620	1890	2160	2430	2700	2970	3240	3510	3780	4050	4320	4590	4860	5130	5400	5670	5940	6210	6480	6750	7020	7290	7560	7830	8100	8370	8640	8910	9180	9450	9720	10000	10270	10540	10810	11080	11350	11620	11890	12160	12430	12700	12970	13240	13510	13780	14050	14320	14590	14860	15130	15400	15670	15940	16210	16480	16750	17020	17290	17560	17830	18100	18370	18640	18910	19180	19450	19720	20000																																																																																																																						
Diam. Suction and Delivery	ins.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																														
Length and Width of Boiler	ins.	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138	140	142	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200																																																																																																																										
Heating Surface of do.	sq. ft.	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118	123	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	213	218	223	228	233	238	243	248	253	258	263	268	273	278	283	288	293	298	303	308	313	318	323	328	333	338	343	348	353	358	363	368	373	378	383	388	393	398	403	408	413	418	423	428	433	438	443	448	453	458	463	468	473	478	483	488	493	498	503	508	513	518	523	528	533	538	543	548	553	558	563	568	573	578	583	588	593	598	603	608	613	618	623	628	633	638	643	648	653	658	663	668	673	678	683	688	693	698	703	708	713	718	723	728	733	738	743	748	753	758	763	768	773	778	783	788	793	798	803	808	813	818	823	828	833	838	843	848	853	858	863	868	873	878	883	888	893	898	903	908	913	918	923	928	933	938	943	948	953	958	963	968	973	978	983	988	993	998	1003

Nominal H.P. of Boiler	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																												
Diam. Steam Cyl.	ins.	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																									
Diam. Water Cyl.	ins.	1 1/2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																								
Length Stroke	ins.	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138	140	142	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200																										
Price "Special" & Boiler with Feed Pump	£	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200																										
Galls. per hour approx.	gals.	720	900	1080	1260	1440	1620	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000	8200	8400	8600	8800	9000	9200	9400	9600	9800	10000	10200	10400	10600	10800	11000	11200	11400	11600	11800	12000	12200	12400	12600	12800	13000	13200	13400	13600	13800	14000	14200	14400	14600	14800	15000	15200	15400	15600	15800	16000	16200	16400	16600	16800	17000	17200	17400	17600	17800	18000	18200	18400	18600	18800	19000	19200	19400	19600	19800	20000																										
Length and Width of Boiler	ft.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																												
Leaving Surface of Box	sq. ft.	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	280	288	296	304	312	320	328	336	344	352	360	368	376	384	392	400	408	416	424	432	440	448	456	464	472	480	488	496	504	512	520	528	536	544	552	560	568	576	584	592	600	608	616	624	632	640	648	656	664	672	680	688	696	704	712	720	728	736	744	752	760	768	776	784	792	800	808	816	824	832	840	848	856	864	872	880	888	896	904	912	920	928	936	944	952	960	968	976	984	992	1000

R. HUDSON'S Patent Steel Trucks, Points and Crossings,

PORTABLE RAILWAY, STEEL BUCKETS, &C., &C. GILDERSOME FOUNDRY, NEAR LEEDS.

Patented in Europe, America, Australia, India, and British South Africa, 1875, 1877, 1878, 1881, and 1883.

N.B.—The American, Indian, Australian, and Spanish Patents on Sale.

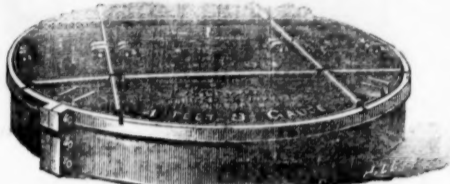
23.—PATENT TRIPLE CENTRE SIDE TIP TRUCK.

Registered
Telegraphic Address:
"GILDERSOME,
LEEDS."
A. B. C. Code used.

(Near Gildersome Station, G.N.R.,
Main Line, Bradford to Wakefield
and London, via Laisterdyke and
Ardley Junctions.)

TELEPHONE No. 14, LEEDS
EXCHANGES.

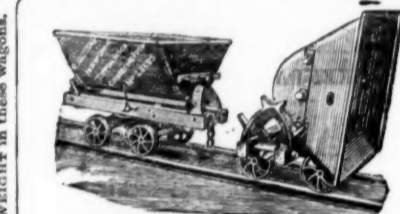
17.—SELF-CONTAINED TURNTABLE,
Requiring no Foundations.



1.—PATENT STEEL END TIP
WAGONS.



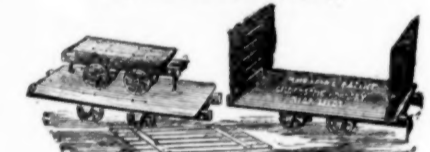
2.—PATENT UNIVERSAL TRIPLE-CENTRE
STEEL TIPPING TRUCK,
Will tip either side or either end of rails.



3.—PATENT TRIPLE-CENTRE STEEL
SIDE TIP WAGONS.



4.—PATENT STEEL PLATFORM OR
SUGAR CANE WAGON.



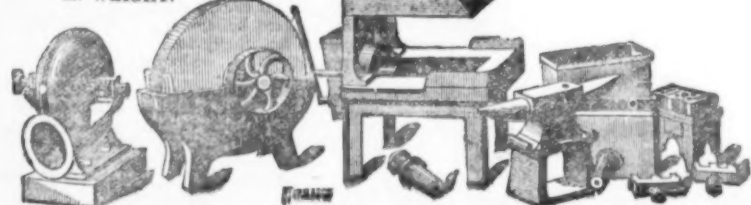
5.—PATENT STEEL CASK.

As supplied to H.M. War Office for the late war in Egypt.
DOUBLE THE STRENGTH of ordinary Casks without any
INCREASE in weight.
(Made from 10 gals. capacity upwards to any desired size.)

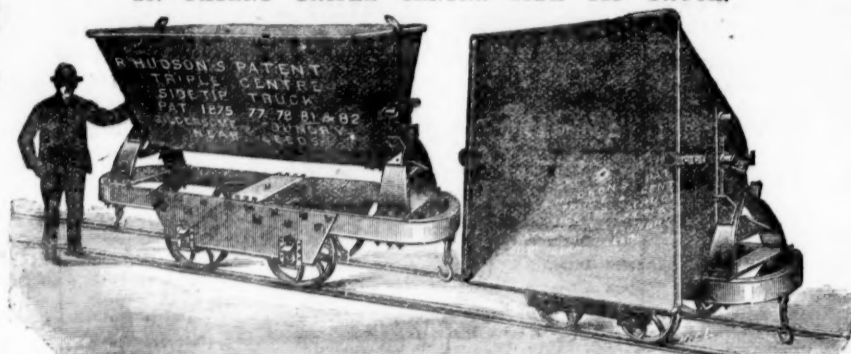


6.—ROBERT HUDSON'S
PATENT IMPROVED IRON
SMITH'S HEARTH,
NO BRICKWORK REQUIRED.

A Special quality made almost entirely
in STEEL, effecting a GREAT SAVING
IN WEIGHT.



Large numbers in use by all the principal Engineers in this
country and abroad.



One man can tip any weight with ease.

7.—PATENT STEEL MINING WAGONS.



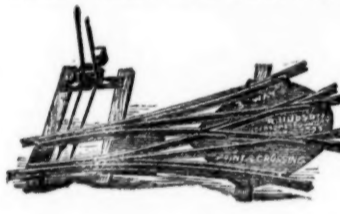
8.—PATENT DOUBLE-CENTRE STEEL
SIDE TIP WAGONS.
Will tip either side of Wagons.



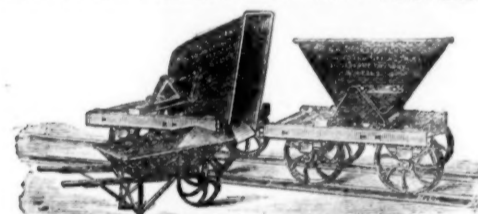
10.—LEFT-HAND STEEL POINT
AND CROSSING.



11.—RIGHT AND LEFT-HAND
STEEL POINT AND CROSSING.



24.—R. H.'s PATENT BALANCED END TIP



18.—"AERIAL" STEEL WINDING
TUB.



Largely employed in the South African
Diamond Fields.

16.—PATENT STEEL WHEELBARROWS.
Made to any Size.
Lightest and Strongest in the Market.

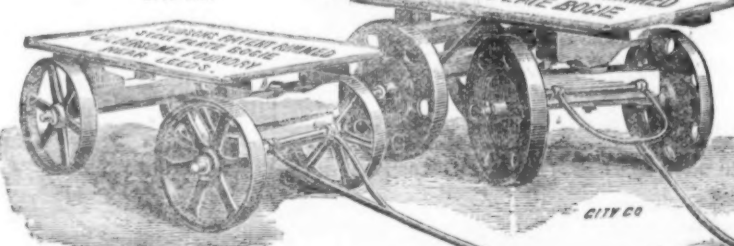


A great success.

25.—PIG-IRON BARROW,
R. H.'s Patent



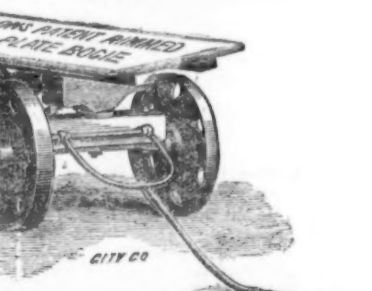
No. 22.



19.—PATENT STEEL CHARGING
BARROW.
Double the strength and lighter than ordinary
Barrows.



No. 21



CITY CO

Upwards of 25,000 of these Trucks and
Wagons have been supplied to the South
African Diamond Mines; American,
Spanish, Indian, and Welsh Gold, Silver,
Copper, and Lead Mines; Indian and
Brazilian Railways, and to Railway Con-
tractors, Chemical Works, Brick Works,
and Coal and Mineral Shippers, &c., &c.,
and can be made to lift off the underwork,
to let down into the hold of a vessel, and
easily replaced. They are also largely used
in the Coal and other Mines in this country,
and are the LIGHTEST, STRONGEST,
and most CAPACIOUS made, infinitely
stronger and lighter than wooden ones,
and are all fitted with R. H.'s Patent
"Rim" round top of wagons, requiring no
rivets, and giving immense strength and
rigidity. End and body plates are also
joined on R. H.'s patent method, dispens-
ing with angle-irons or corner plates.

CAN BE MADE TO
ANY SIZE,
AND TO ANY
GAUGE OF
RAILS.

Pumping Engines
for
Mines, Water Works,
Sewage Works,
and
General Purposes.

CATALOGUES ON

See Exhibits at Stand No. 1195, West Annexe; and also in the Electric Lighting Department, Inventions Exhibition, London.

PUMPING & MINING MACHINERY.

HATHORN, DAVEY, & CO., LEEDS.

Hydraulic Pumps,
Winding Engines,
Air Compressors,
Man Engines,
Capstans,
&c., &c.

APPLICATION.

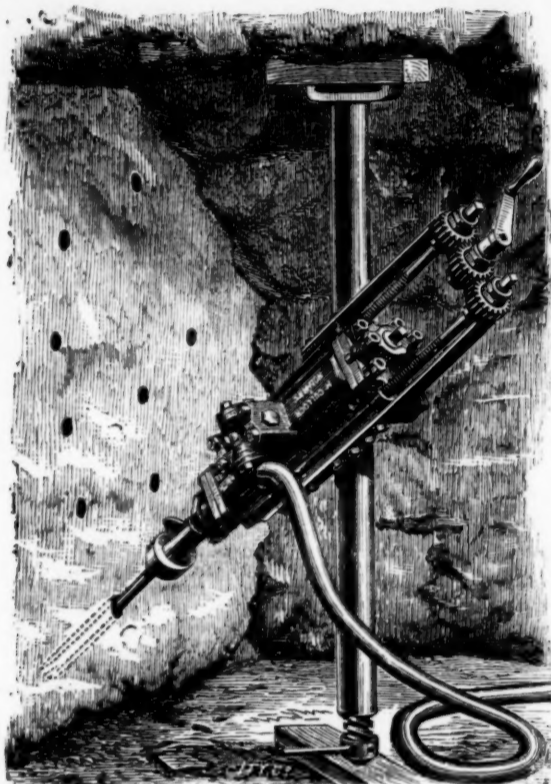
This Drill may be seen at work any hour from 10 A.M. to 6 P.M. at the International Inventions Exhibition, Stand No. 194, North Court, South Galleries.

FIRST SILVER MEDAL, ROYAL CORNWALL POLYTECHNIC
—Highest Award for Effectiveness in Boring, and Economy in the Consumption of Air.

JUBILEE EXHIBITION, 1882.

THE PATENT

"CORNISH" ROCK DRILL.



FIRST SILVER MEDAL AWARDED AT BORING COMPETITION, DOLCOATH MINE, 1881.

The "CORNISH" ROCK DRILL and "CORNISH" COMPRESSOR

Are now largely in use, and in every case are giving entire satisfaction.

For Testimonials, Illustrated Catalogues and prices, apply to—

HOLMAN BROTHERS,
CAMBORNE FOUNDRY,

MAKERS OF

MICHELL & TREGONING'S PATENT PULVERISER, and HOLMAN'S IMPROVED STEAM or AIR PUMPING and WINDING ENGINE for Underground Quarries or Shallow Mining. Indispensable for Shaft Sinking with Rock Drills. Also makers of all kinds of MINING MACHINERY at

THE CAMBORNE FOUNDRY AND ENGINE WORKS, CAMBORNE, CORNWALL.

THE PATENT
"ECLIPSE" ROCK-DRILL
AND
"RELIANCE" AIR-COMPRESSOR.

First Silver Medal awarded at Boring Competition, East Pool Mine, Sept. 1883.



FOR ILLUSTRATED CATALOGUE AND PRICES, apply to—
HATHORN & CO., 22, Charing Cross, London, S.W.

W. F. STANLEY

MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.S. GOVERNMENT, COUNCIL OF INDIA, SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.

MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.

Price List post free.

ENGINE DIVIDER TO THE TRADE.

ADDRESS: GREAT TURNSTILE, HOLBORN, LONDON, W.C.

THE CANADA PACIFIC IRON AND STEEL RAIL COMPANY.

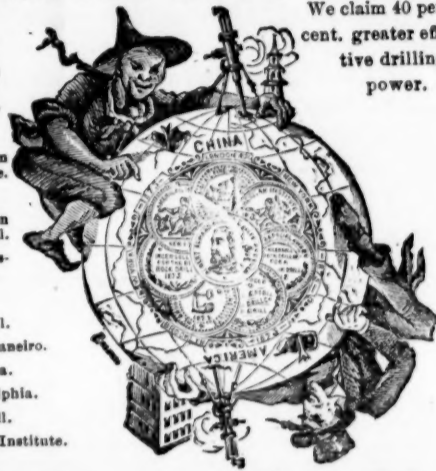
The Subscriber is desirous of opening communication with some party in England for the purpose of organising the above company. One thousand acres of red hematite ore not far from the line of the C. P. R.

Address, HUBERT C. JONES, Solicitor, Brockville, Ontario, Canada.

PATENT
"INGERSOLL ROCK DRILL."

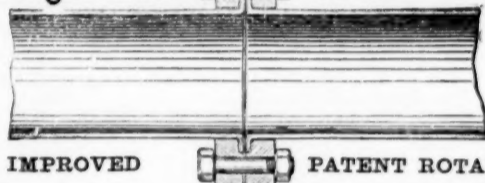
MEDAL
AND
HIGHEST
AWARDS.

1872—American Institute.
1873—Ditto.
1874—London International.
1875—Manchester.
1875—Leeds.
1875—Cornwall.
1875—Rio de Janeiro.
1876—Australia.
1876—Philadelphia.
1877—Cornwall.
1877—Mining Institute.
1878—Paris.



We claim 40 per cent. greater effective drilling power.

Wrought-Iron Steam Tubes.



IMPROVED

PATENT ROTARY

Helico-Pneumatic Stamping Mills.

TUBES FOR BOILERS, PERKINS'S, and other HOT-WATER SYSTEMS.

For Catalogues of Rock Drills, Air Compressors, Steel or Iron Steam Tubing, Boiler Tubes, Perkins's Tubes, Pneumatic Tubes, and all kinds of Machinery and MINING PLANT, apply to—

LE GROS, MAYNE, LEAVER & CO.
60, Queen Victoria Street, London, E.C.

THE PATENT

"Cranston" Rock Drill,
AIR COMPRESSOR, AND DEEP BORING MACHINERY.

For prices, and particulars of rapid and economical work accomplished, apply to

J. G. CRANSTON,

22, GREY STREET, NEWCASTLE-ON-TYNE.

For Excellence
and Practical Success
of Engines.



Represented by
Model exhibited by
this Firm.

HARVEY AND CO.,
(LIMITED)

ENGINEERS AND GENERAL MERCHANTS,
HAYLE, CORNWALL.

LONDON OFFICE—186, GRESHAM HOUSE, E.C.

MANUFACTURERS OF

PUMPING and other LAND ENGINES and MARINE STEAM ENGINES of the largest and most approved kinds in use, SUGAR MACHINERY, MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL. SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF

HUSBAND'S OSCILLATING STAMPS.

These Stamps are now working on the "Owen Vean" Mine, near Marazion, and may be seen on application to Mr. Derry, the manager. Four heads stamp from 80 to 90 tons of tin stone, ordinary hardness, in 24 hours. The consumption of fuel is much less per ton of stone stamped than by the old system, and the wear and tear also much less. See Mr. Derry's paper (extract of which appeared in the Mining Journal of Nov. 1st, 1884) on these stamps read before the Mining Institute of Cornwall.

SECOND-HAND MINING MACHINERY FOR SALE,

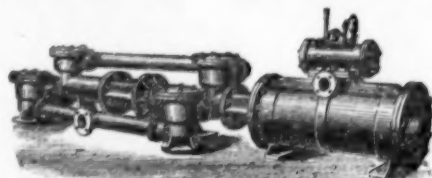
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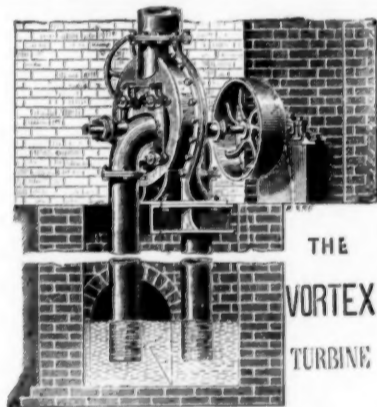
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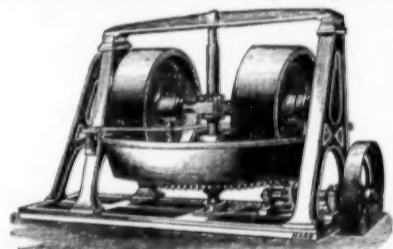
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Original Correspondence.

AKANKOO GOLD MINING COMPANY.

SIR,—I saw a letter in your issue of the 1st inst., under the pseudonym of "Lex," enquiring whether this company was a swindle. I should reply:—No; and should like to ask, in return, the following questions:—Whether the directors will, as promised by Mr. Maurice Grant, the Chairman—viz., give us early information of what takes place on the mine? whether they have any good news from the mine of late? whether Mr. Harvey has gone out to confirm the good news, and whether the board or any of its directors are quietly buying up shares in the market? JAMES B. ROSS.

Lancing House, Ealing, August 7.

GOLD AMALGAMATION, AND THE GOLD COAST MINES.

SIR,—Several of your correspondents of late have been addressing you on the subject of gold extraction and amalgamation. It seems to me that the market is fairly glutted just now with amalgamation. There are so many new patents for the extraction and amalgamation of gold that it would be difficult to say which is the best and the one most worthy of attention. In my poor opinion London is the worst place in the world for bringing out a patent for gold mining in any shape or form, for the simple reason that all the mining done in London is done on paper. Another reason is, because one never, or very rarely ever, has the opportunity of seeing one of these machines at work in London, or if one is fortunate enough to see one at work, it is only with a few pounds of prepared stuff, which is quite a different thing to having them actually at work on a mine, where it requires all the skill and knowledge of the chemist as well as the miner to extract the gold. There are undoubtedly some grand patents for amalgamation, some of which I believe have never yet had a fair trial on a foreign mine, the reason of which it is not far to seek; and considering the vast fields open to them to really test the superiority of the different processes—namely, the Australian gold fields—where there are hundreds of thousands of tons of tailings, with only a portion of the gold extracted, and as Mr. Moon further says, and that gentleman is about right, what a field is thus presented, not only for the investment of capital without the risk so common to most enterprises, but for really testing the superiority of the various processes for gold extraction and amalgamation; therefore I say Australia is the place for bringing out these patents, and which offer every advantage for working before bringing them before the London public, and which is so far away from all mining operations. I am confident arrangements might be made for placing any quantity of these machines on the Australian gold fields, and depend upon it the process which saved the most gold at the least cost would soon gain a reputation in every part of the mining world, and the fortunate proprietors soon make a fortune, saying nothing about the extra enormous quantity of gold which would be circulated throughout the world to the benefit of mankind, but which is now lost, and although the superior headedness of those who still jog along in the good old-fashioned way of amalgamation by copper plates, and who will neither be taught, shown, or convinced that there is anything superior to their old-fashioned methods of amalgamation: but modern science and appliances must crush them out ere many years have lapsed, and like some of our musty old charters, will be buried far down never to be brought to light again, and which Mr. Moon has so well illustrated in the last two numbers of your valuable Journal; for be it known that gold mining is the industry that keeps the great ball of commerce rolling, and as Mr. Thomas Cornish, one of the best authors of gold mining, says, it is by that source alone that trade, finance, and commerce is ruled.

Take, for instance, the Gold Coast mines. My firm belief is that the chief cause of non-success of the now one or two remaining mines is the want of proper amalgamating appliances. I venture to say that if we had one or two of the most modern processes for amalgamation, with practical and honest management, that these mines must pay, and pay well. It is not there gold in Africa, but how to save it after it leaves the stamps. This has been proved at the Taqna Mines, for half the gold is lost in the tailings. Another reason why these mines have proved a failure is through amateur and palm-oil engineering. The directors of the Gold Coast mines had an idea that anyone was capable of developing one of these mines, and could send home bucketsful of gold providing he had been on the Coast before, and so long as they lavished the shareholders' money, and kept them well supplied with champagne and whiskey to drink the chief's health with.

I defy anyone to say that gold does not exist in enormous paying quantities in this part of Western Africa, and in no part of the world does gold mining offer such a profitable field for the investment of money if honestly managed, and by practical gold miners with the aid of the chemist. The few practical gold miners who were sent out after most of the capital had been spent to manage these mines went out in many cases under false representations. On arriving there they found the mines heavily handicapped, was kept short of money, supplied with inferior provisions, and the very worst of claret; every way they turned money was owing, and discontent reigning supreme amongst the natives, who refused to work, and who took every opportunity to steal whatever they could lay their hands on, until at last worry and anxiety overcame the Europeans, and they were knocked down with African fever and left to die and rot on the burning shores of Africa, or sell their own clothes and raise the money the best way they could to get back to England with; and yet these men were scorned and looked upon as duffers because they could not send home gold under conditions like these. These are the reasons why the Gold Coast mines have proved a non-success. Is there any wonder? Had the advice of those who had experience been taken the Gold Coast mines would now have been paying handsome dividends, and would have been second to none in the world. I notice in the Mining Journal of the 1st inst. a letter on the Akan-

koo, signed "Lex," in which that gentleman asks, Is this another swindle? Allow me to say this is a splendid property, and must pay enormous to work if managed by practical gold miners, and if there is a swindle in it, well, it is not the property, for it is a sound, rich property, and must pay if worked by practical men—no white-washed novices.

I also notice Mr. J. B. Ross, the late manager for Cankim, is again before the curtain, and I am sorry to say he is not the only one that has been hoaxed up with coming meeting and speedy settlements, and which have always been so near and yet so far. I think that gentleman is something like myself—that is, we knew rather too much about gold mining for some of them, but we did not know enough of that which we ought to have known, and there is now no help for us. Excuse the length of this letter, Mr. Editor, the subject, I think, amply justifies it.

DAVID W. LOWMAN (late of Africa).

78, Manby-road, Leyton-road, Leyton, August 11.

THE TOCOPILLA COPPER MINES.

SIR,—I have just read Mr. John Lean's letter in your columns, which curiously enough supports my remarks at the Tocopilla general meeting. I say "curiously enough" as my remarks were not reported by you. On that occasion I stated I was an original shareholder, and I bought my shares, as I had been taken over the mines by Mr. José himself some years ago. Though nearly all my friends sold their shares at a large premium, urging me to do the same, I steadily resolved to hold, and still hold the number originally allotted to me. Upon my return here I wrote the secretary, so that there should be no mistake about my views, that if they continued to spend more than 19s. out of 12. Messrs. José and Co. would sooner or later foreclose, and repossess themselves of the property.

Good management can always make a thing pay; bad management, on the contrary, is always rich in excuses, and I express my own individual opinion when I say that Messrs. José and Co. can make the Tocopilla Mines return to-day as much as they ever did. We all know that the master of a ship that has always paid a good dividend replaced by another captain the same ship not only often loses money but meets with continuous mishaps. In a case of that kind you change your master until you fix upon a lucky one again. If the manager of the Tocopilla Mines cannot make them pay there are men that can. I would soon find one who could and would, but as a small original shareholder what can I do, though the loss to me as things are going is anything but a pleasing prospect.

Swansea Harbour, August 11.

ROBERT CAPPER.

MINING IN SPAIN.

SIR,—The northern boundary line of the province of Leon passes along the heights of the ridges of mountains called the Cantabrian chain. This name is given to the portion of the Pyrenees west from the Picos de Europa, which are situated partly in the province of Santander, and partly in that of Asturias. The chain consists of several parallel ranges of great height and vast grandeur. The most northerly belong to the upper carboniferous period, and the most southerly to the permian. Underlying the limestone masses on the north are the Asturian coal fields, comprised of about 100 seams of coal, at a pitch of about 45°, and varying in thickness from 6 in. to 9 ft., and even more. One of the parallel ranges above referred to consists of an immense mass of stinkstein, intersected longitudinally for a distance of about 15 kilometres by several beds of dolomite—one of which has an average surface width of about 40 metres, and accompanied by a stratified dolomitic limestone. The interlying valleys have here and there extensive villages, whose inhabitants are engaged in agricultural pursuits and as graziers—their flocks of sheep and goats dotting the mountain sides everywhere. Near one of these villages, called Carmenes, there existed extensive attle heaps from workings effected by the ancients. One of these heaps proceeded from an immense cave, having a length of over 80 metres, a height of 30, and a width of 25 metres. Attention was first called to this cave by some Spanish engineers, who happened to pass that way. They noticed that the attle heaps were spotted with green and blue carbonate, a light green carbonate of nickel, and a black ore, which was passed by at that time as being of little or no value. The cave was opened and examined, and found to have copper and other ores attached to its walls throughout. This coming to the ears of some speculators a mining sett was taken up from Government, including this cave and surroundings, and work was commenced. Careful inspection of the roof of the cave showed that a large quantity of mineral still remained to be taken out. Steps were carefully taken to stop this, resulting on the first attempt being made in the death of five men, through the fall of a large mass of black oxide of cobalt upon them. There were 7 tons picked out of this mass of a rich cobalt ore. Work was for some time suspended owing to this misfortune, but was again recommenced. A gallery was put in at the side of the hill to tap this cave, which in winter became full of water. This was effected, and on approaching it copper and cobalt ores were out in paying quantities. Work was continued for some time with desultory results owing to want of capital, until the mine at length fell into the possession of its present proprietors. They outlaid upon it sufficient money to place it in its present position, and with the product of their first shipments have recouped all their outlay, and still have a large balance to the good. The ore is classified upon the spot into Nos. 1, 2, and 3. Taking as a basis 180 tons, there will be of each class as follows:—No. 1, 120 tons; No. 2, 56 tons; No. 3, 4 tons. The assay values are as follows:—No. 1. Copper, 31 per cent.; oxide of cobalt, 2.05 per cent.; silver, 600 grammes per ton. No. 2. Copper, 33 per cent.; oxide of cobalt, 6.40 per cent.; silver, 600 grammes per ton. No. 3. Copper, 27 per cent.; oxide of cobalt, 17.20; silver, 600 grammes per ton. Value of No. 1, at 10d. per kilogramme for copper, and 5s. 6d. per kilogramme for oxide contained, 20l. 2s. 9d. per ton. No. 2, at 10d. and 6s. 9d. respectively, 36l. 9s. 6d. per ton. No. 3, at 10d. and 11s. respectively, 105l. 17s. per ton. Cost of ore put on market at Swansea per ton, all charges included, not over

12l. per ton. The cubical contents of the ore mass laid open ready for stopping give 157,320 tons, which may be classified into the following:—No. 1, 104,880 tons; No. 2, 48,944 tons; No. 3, 3496 tons. The mine is a distance of 4 miles from a railway station. The foregoing details may be of some interest to your readers, as they show that Spanish mining wealth has not yet been exhausted. J. A. JONES.

Gijon, August 4.

VICTORIA GOLD.

SIR,—In your issue of the Mining Journal of August 8, I note your remark "The Victoria Gold Company (Limited)." I also read the Circular, page 898.

Some months since I entered the office of the secretary of the company, and whilst there bags containing ore that had been brought from the Victoria Gold Mine by Mr. W. Ness were opened. I had the opportunity of taking samples from each bag, and from each I took the first piece that came to hand, lettering it with the corresponding letter on the bag. I submitted the samples to more than one or two experts engaged in mining operations. One sample, marked P, was pronounced by each to be exceedingly rich, and that 40 ozs. of gold might be expected per ton. The other samples were pronounced good for the yield of gold. In the absence of the necessary machinery for treating large quantities an idea has occurred that large pestles and mortars might have been utilised, one producing 40 ozs. to the ton as a result would give 160l. In England on our public roads we have labourers employed in reducing large blocks of stone to small sizes at a trifling expense. It is a question if native labourers are available, and could have been employed for the purpose. If only 50 tons had been treated the result would have been assuring to the shareholders. As a matter of course the 40 stamps is what is required, the results of which would have shown important results with the poorest of the quartz.

The statement made by Mr. W. Ness that of the ore being an outcrop, the quantity being enormous, and the quality of the ore so good, the property has advantages scarcely any other gold-producing property possesses. It is a matter of importance, when taken into consideration, Vice-Admiral Powell expressed the same opinion of the value of the property. Mr. W. Ness's visit was not in the capacity of a civil or mining engineer. He availed himself of an expert at the El Callao Mine, upon whose opinions, with the investigation that took place, he could confidently depend upon and submit to the shareholders. The public have become familiar with the name of the Victoria Gold Mine. Promises have been made to the shareholders, but it is not the fault of the mine that they have not been fulfilled, and the cry of the "Wolf, the wolf," has caused some to believe there is no wolf; but the time will come when the wolf will make his appearance, not to devour, but with rich results to reward those who have had patience to wait. I have recently received a letter from the West Indies, in which a desire is expressed that I should undertake the arrangement of all matters financial and otherwise in London of a rich-producing gold mine situated in Venezuela, which, should I identify myself with strict economy consistent with the requirements, will have my best attention.

Exchange, Bristol, August 12.

W. B. PALMER.

PRESS REPRESENTATIVES AND MINING SHAREHOLDERS

SIR,—As an adventurer in St. Just United who was present at the last meeting, I beg to inform you that the statement in a paragraph of your issue of the 8th inst. that a shareholder told the reporters he would have them put out of the room if they put down what he was about to say, is untrue. There was a general concurrence of opinion that some details mentioned should not be reported in the papers, and the sense of the meeting to that effect was expressed by the Chairman, and it was only when the reporters after this continued busily writing that a shareholder seeing them apparently acting in defiance of the will of the meeting intimated that they would be liable to be ejected if they persisted in doing so. Probably your more general remarks as to insults offered in St. Just to representatives of the Press have equally little foundation in fact.

Boswedden, St. Just, August 12.

JOHN BOYNS.

[Mr. Boyns contradicts himself, for after denying the accuracy of our statement he confirms it in the next sentence. Mr. Boyns should be aware that reporters have frequently to work against time, and that when they "were busily writing" they were probably transcribing their notes and not taking notes of speakers' remarks. As a general principle it is politic to treat journalists with courtesy.—Editor, MINING JOURNAL.]

DEFECTIVE MINING IN ION AND MANAGEMENT.

SIR,—I am pleased to see such an authority as Mr. J. Lean adding his testimony of what he has known and seen of School of Mines gentlemen. I fully believe that if the Tocopilla Mines had remained under the practical management of the Messrs. José and Co. that success would have been the result. But the order of the day is to appoint by favour, instead of by merit, persons for all kinds of situations in connection with mining. The universal depression in mining adventures has been entirely brought about by paid cliques (State paupers), who have manipulated a scale of so-called mining qualifications, so as to enable their favourite student "cousins" to force themselves into the mining ranks to the exclusion of those who are qualified by legitimate means—mining experience. What are Mining Inspectors' duties? Is it needful to pay salaries ranging from 600l. to 1100l. per year to mining imitators, merely to do the twelfth part of the work formerly done by Mr. Hunt, of the Mining Record Office, who used to collect the mining statistics of all Great Britain? We require Inspectors to go underground often to see that the provisions of the Mining Acts are being respected with regard to the protection of miners' lives, and not to be waiting until from 24 to 48 hours after a fatal accident has taken place to go down to find no trace of the original cause of such a melancholy disaster.

"Philosophical" evidence at coroners' inquests has its own value and nothing more in explaining "there he is, gone." But what about the numberless widows and orphans that are being bereaved

of their beloved bread-winners? Seeing the vast numbers of miners employed in the mines of Great Britain, also the lamentable percentage of loss of life and limb constantly occurring in connection with this most difficult and highly hazardous calling, it behoves the nation to arouse themselves to the solemn responsibility of appointing such properly qualified men, who are calculated, by their superior practical abilities, to reduce to a minimum such deplorable catastrophes as are being almost daily reported in our newspapers. We want a Royal Mining Commission (and not a Royal School-book Commission, with endless misleading titles) to correct the present abuses in mining, in order that its coroners' and undertakers' fees shall be confined to non-preventive causes. Our Parliamentary candidates have a wide scope for drafting a Bill to extinguish mining quackery institutions with a view of preventing the impositions which are now being thrust wholesale on the mining public, and generating the above-mentioned lamentable consequences.

Cornwall, Aug. 12.

MINER.

THE PENEGARREG SILVER-LEAD MINING COMPANY (LIMITED).

Mr. THOMAS COLLINGWOOD KITTO has made the following report on this mine:—

I have much pleasure in handing you my report on the Penegarreg Silver-Lead Mine, and at the outset permit me to congratulate you on the tenacity of purpose which has enabled you to carry on the development of this promising young mine, on behalf of the company, through a commercial depression almost unparalleled in the history of lead mining.

I know that to prosecute a work of the kind, in face of so great a depression in the mining and metal markets, required a strong belief in the success of the mine. However, "nothing succeeds like success," and I may at once state that your prospects are exceptionally good. By erecting machinery necessary for treating the ore from the flookan lode—and it is by no means expensive—your returns will at once be commensurate with the outlay, and the silver-lead from the other—the south lode—would be clear profit; but I had better give the details, so that you may realise the exact state of affairs.

The Penegarreg Mine, as you are aware, is situated in a very high hill, close to the village of Talley, Carmarthenshire, in South Wales, and is furnished with all the necessary machinery, engine, boiler, crusher, jiggers, and buddles for treating over 100 tons of silver-lead ore per month, the ordinary ore contained in the south lode as distinguished from that in the flookan.

From the foot of the hill a tunnel (adit level) has been driven west at the lowest convenient horizon. After driving some considerable distance a nice lode of copper ore has been struck, and is now exposed in the bottom and along the roof of the tunnel. A few years ago this lode of copper ore could have been worked at a good profit, but in the present state of the copper market your are doing well to let it remain where it is. Should there be a rise of (say) 15s. per ton in fine copper this run of copper ore can be returned of a good profit. From the copper lode the adit has been continued west until it has passed into quite another zone, and here two very pretty looking silver-lead lodes have been discovered, and another is known to exist a little to the north. These lodes have not been named, but for convenience I will call them the south lode and flookan lode. The south lode varies in breadth from a few inches to several feet, and from the place where it was first struck to the extreme end it carries a course of solid silver-lead ore, which varies more or less, according to the breadth of the lode. The ore in lode end carries a fair amount of silver, and in some parts the ore is so pure that it is saleable without any dressing. There is every prospect of this being a very profitable lode.

The flookan lode is not so showy as the south lode, but it is one of the best silver-lead lodes to be found anywhere. At the point where I examined this lode the ore is largely mixed with flookan (soft clays), which hides the silver and the lead; consequently, it might be passed lightly over by those who had no experience in similar formations. The ore in the flookan lode is rich for silver, and in order to treat this ore successfully you should have ten to a dozen puddlers, or disintegrators, with (say) half-a-dozen jiggers, and you could at once return 50 tons per month from this flookan lode, and at the same time add fully 20 per cent. per month to your reserves. You will therefore see that you have a prize of no mean order already laid open, requiring only a little inexpensive machinery to convert it into actual money and profits. If a great many persons were to inspect your property as I have done probably they would recommend you to send away the ore you have exposed at once, but I do not recommend you to do so; in fact, I would deprecate such a course, because it would be what is known in mining parlance as picking the eyes out. You have a first-class property, you are steadily opening up your reserves, and when you have erected the machinery, which I recommend, you will have one of the best silver-lead mines in Wales. I shall be glad to take as many shares as my means will allow; and, further, if you carry out my recommendations, I shall be prepared to take the entire management of the property without any remuneration, save a percentage on the profits, and this is an offer that I would not make with regard to any mine I have inspected during the last three years, and they have been over 50. I may add that the future of the mine in depth is assured. If I have overlooked any points on which you require information kindly let me know and I will supply them at once.

THOMAS COLLINGWOOD KITTO.

Lulworth House, Gunnersbury, July 18.

THE VICTORIA GOLD COMPANY.

SIR,—As a subscriber to the *Mining Journal* I am amused week by week in reading the correspondence—sometimes indignant, always dejected—in your columns from shareholders in various foreign gold mining companies in which their capital is sunk, apparently beyond hope of profit or redemption. It is a matter of considerable astonishment to me that what I may call the speculative section of the British public, usually so quick to seize upon a favourable opportunity, should at the present time be passing by in apathy and indifference what is probably the very richest investment ever thrown upon the English market. I refer to the Victoria Gold Company, Venezuela. I observe that your issue of August 8th inst. contained the report of Mr. Walter Ness, of Glasgow, upon this mine. Mr. Ness is a mining engineer whose sterling probity and great practical experience are of wide reputation. The public may not be aware that he was sent out to inspect and report upon the Victoria gold concession, not at the instance of the board of directors, but as the confidential and trusted adviser of a body of Scotch shareholders, whose former investment in the Victoria Company awaited and entirely depended upon his verdict. Such an impression has been produced upon Mr. Ness by the extraordinary features of this property, that he is throwing up an extensive and lucrative practice to become its managing director, and although his published report is strictly technical and moderate, he does not hesitate, in conversation to speak of the vast riches of Victoria in terms which if reproduced in print would probably be rejected as incredible. His report has already resulted in handsome subscriptions, but I understand that more are required. Debentures upon favourable terms are now being issued for the sum required, the subscribers to which are protected by the trusteeship of four gentlemen of high social and commercial position, and all of whom are shareholders in the company. If the Victoria Company is allowed to suffer from the unaccountable apathy and indifference which is now manifested towards it those interested in gold mining will only have themselves to thank for having missed so splendid an opportunity—timber and water in abundant supply, and ore of unequalled richness, with an outcrop so vast that 200 stamps continually running for a generation will not compass its exhaustion. Briefly stated, such are the features of Victoria, so extraordinary as to be scarcely credible, but repeatedly proved to be true by evidence of unimpeachable veracity. In no way speculative, its vast riches visible to the eye, and correspondingly accessible, a mining certainty, it is passed by for the forlorn hopes of the Transvaal, the Gold Coast, and the hundred and one other burial places for the capital of the British public. The cry of

"Wolf," as in the case of the well-known fable, but with different effect, has been applied once too often in the case of the Victoria Gold Company. I enclose my card, and subscribe myself—

August 13.

VERITAS.

LISBON-BERLYN (TRANSVAAL) GOLD FIELDS COMPANY (LIMITED).

SIR,—I was very pleased to hear from your Mining Notes in your last issue that the directors of this company had been successful in raising 3000*l.* to keep the works going in the Transvaal. The report of the meeting published in your Journal some short time since was both deplorable and sickening, and must have been a very severe blow to many of the shareholders. Never in the history of mining has shareholders' money been so recklessly and shamefully squandered. Here is another instance (out of many) of inexperienced, incompetent, extravagant, experimental, and ornamental mine management. I sincerely hope the directors will inaugurate a skilful and economical management in the Transvaal with the fresh capital raised, and go in for developing the property on a proper basis. I say fearlessly the property has every chance of success with skilful direction, and had the money that has been squandered on high salaried incapables and useless surface works been put into underground developments, the directors would have had no reason for raising fresh capital, or presenting the shareholders with such a sad history of the undertaking as they have had to do on one or two occasions. I do not think it would be just to attach the whole of the blame of the non-success of the undertaking on the directors. Especially Baron Grant, who I believe has worked extremely hard for the company. I maintain the directors should have, as soon as information reached England, instituted a searching enquiry into the gross mismanagement going on in the Transvaal, and have rectified it; and have saved the mines at an earlier stage.

In a report I made at the request of the resident director in September, 1884, I called his particular attention to the gross mismanagement going on, and to the great loss of time, capital, and labour, and that mining in every sense of the word was entirely ignored by the ornamental amateurs in charge of the property. In another paragraph I wrote—"Unless a new system of working and management be immediately adopted the company must inevitably collapse." My predictions unfortunately for the shareholders have proved in every respect to be true. My report I understood at the time was forwarded to the directors in England. The resident director on several occasions, I am informed, protested at the disgraceful manner in which operations were being carried on.

THOMAS R. PARKYN,

Late Mining Engineer and Manager to the Transvaal Copper and Mineral Mines, near Kongsors Post, Lydenburg, Roche, Cornwall, August 13.

QUICKSILVER.

	1884.	1885.
Imports from Jan. 1 to July 31, bottles, about	54,643 ...	about 49,016
Exports " " " "	32,593 ...	" 24,578
Imports for July " " "	3,802 ...	" 427
Exports " " " "	5,646 ...	" 3122
Price per bottle, about	£5 6 3 ...	" £5 12 6
Stock in London to July 31, 1885, roughly calculated, is about	91,500 bottles.—London, August 12. J. BENNETT BROTHERS.	

SPONTANEOUS COMBUSTION, AND UNDERGROUND TEMPERATURES IN AIR CURRENTS.

At a meeting of the North Staffordshire Mining Institute at Stoke-upon-Trent, on Monday evening,

Mr. F. WRAGGE, the President, in the chair,

Mr. A. R. SAWYER, Assistant Government Inspector of Mines, contributed papers supplementary to those previously read and noticed in the *Mining Journal*, "On Temperature of Air Currents in Mines," and "Spontaneous Combustion."

Mr. SAWYER said the following additional remarks on the temperature of air current in mines are consequent on some observations made at the last meeting. At the outset of my paper I said that good ventilation with a proper distribution of air besides diluting noxious gases tends to lower the temperature in unextended workings during the greater part of the year. Therefore the remarks I made with regard to the air availing little to increase the workable depth has reference to great depth, extended workings, and a practicable amount of air. Workings in connection with deep shafts are certain to be extensive, and the air consequently exposed to their temperature for some time.—1. As to the temperature of these surroundings. It is well known that the temperature of the earth's surface is approximately invariable at a depth of from 20 to 30 yards, and that it corresponds to the mean annual temperature of the air above the point of observation. This temperature is roughly 50° Fahr. for these parts. From this point there is a gradual increase of temperature downwards. The rate of increase varies considerably, but assuming it at from 20 to 24 yards, the following table gives the temperature of the rock at each colliery of some of the deepest places at which the temperature of the air was observed:—

Colleries.	Depth of place observation.	Calculated temperature of rock at	
		1° in 20 yards.	1° in 24 yards.
Berry Hill	370	67°	64°
Glebe	440	70	67
Great Fenton	587	78	73
Florence	587	78	73
Dukinfield	730	85	79
Black Mine	795	88	82
Dukinfield	854	91	84
Cannel Mine	967	94	86
	971	97	89

This state of things implies a continual escape of heat from the interior of the earth by conduction. Besides this constant supply of heat to the rocks with which the air in a mine comes in contact, there are other well-known sources of heat which all tend to elevate the temperature of the air.—2. As to the adaptability of the air to these temperatures. The specific heat of dry air is .237; that of carbonaceous rock is roughly .181. It follows that the quantity of heat which 1 cubic yard of these rocks parts with by its temperature falling 1° Fahr. will raise about 300,000 cubic feet of air 1° Fahr. Quiescent air is no doubt a bad conductor of heat, but any particle of it coming in contact with another body readily assumes the temperature of that body. As an instance of this we have the action of air on the human body in a Turkish bath, in which the temperature of the dry air in the first room is 140° to 150°; that of the second 170° to 190°; and that of the third room as high as 240°. If it were not for the ease with which the particles of air in contact with the human body assume its temperature about 100°, by parting with some of their heat to produce the evaporation of the fluid pouring out of the sweat glands, life in such a temperature would be impossible. Air passing through a mine in an extremely agitated condition, so that every particle of it is bound to come in contact with the surrounding rocks during its course. The readiness with which air in motion assumes the temperature of its surrounding is shown in hot wind apparatuses for drying and other purposes. The main feature consists in the ability they afford to economically heat large volumes of pure air or mixed air whilst in rapid motion to the required degree of heat. Air passing through these apparatuses with a high velocity can be economically and quickly heated to almost any required degree, and with perfect control over the temperature; 3000 to 4000 cubic feet per minute at a temperature of 300° to 600° of heat being easily obtainable. If 8000 cubic feet of air pass through a district of a deep colliery, having 4000 yards of air roads from shaft to shaft they will be exposed to the temperature of the rocks for over half-an-hour, quite long enough for each particle to assume the same temperature; 8000 cubic feet per minute represent 77,000,000 cubic feet in 24 hours. Assuming the temperature of the rocks at 90° and that of the air at the downcast shaft bottom at 50°, the temperature of those 11,000,000 cubic feet of air will have to be raised 40° to assume that of the rocks. It has already been stated that to raise the temperature of 300,000 cubic feet of air 1°, 1 cubic yard of rock

has to part with its heat to the extent of 1°. Therefore, 38 cubic yards of rock will have to part with heat to the extent of 1° to raise 11,000,000 cubic feet of air 1°, and 1520 cubic yards of rock will have to part with heat to the extent of 1° to raise these 11,000,000 cubic feet of air from 50° to 90°. This volume of air will come in contact with about 28,000 square yards of rock surface. If each cubic yard of rock, of which 1 square yard is in contact with the air, parts with 1-18 part of a degree during the 24 hours, the required raising of the temperature of these 11,000,000 cubic feet of air is attained, without the other sources of heat being taken into account. The question, therefore, is—whether the continual escape of heat from the earth's interior by conduction will suffice to replenish the supply which the heating of the air demands. It is with a view to answer this question that my observations were made, and it seems to me that they bear out the remarks which I made in my paper.

Mr. SAWYER, on the subject of "Spontaneous Combustion," said the action of atmospheric air on the substances which gobs contain is two-fold:—1. Chemical.—2. Physical. These substances are:—1. Combinations in which sulphur occurs. Of these iron pyrites is the principal, and it is found in various conditions, and varies much in its liability to oxidise by contact with atmospheric air. The presence of moisture in air and in the gob promotes the oxidation of pyrites.—2. Finely divided carbonaceous substances which have the property of absorbing and condensing oxygen within their pores, and eventually to become oxidised. Both the oxidising and the condensing process is accompanied by the development of heat. Consequently, from a chemical point of view the ventilation of gobs, and especially of those containing abundance of oxidisable substances is injurious. Air acts physically by reducing the temperature of these substances over which it passes. This action is beneficial, and tends to counteract or retard the chemical action in gobs, and especially in pretty clean ones, but as already remarked only up to a certain temperature. There are gobs in which the conditions for chemical action are so favourable owing to the presence of pyrites and moisture or slack and carbonaceous shale that the benefit arising from the physical action of the air may be insignificant in comparison with its chemical action. In such cases it is clear that air acts injuriously and ventilation is detrimental. It stands to reason that no chemical action can go on in a gob from which all air is excluded, and if this could be done in all cases gob-fires would never take place in gobs. But herein lies the difficulty. It is only in a comparatively small number of seams that this is at all possible. In most seams there is no packing material whatever; the roof falls and leaves open water, which with thick seams are very large. The idea of bringing packing material from a distance cannot be entertained. It is also essential to remove the gas, which in most seams in this district would accumulate in these wastes in dangerous quantities, and overflow into the workings. As these cavities must fill, it is preferable to allow them to fill with semi-quiescent air and fire-damp, or to allow a current of cold air to pass through them? In most of the seams of North Staffordshire the latter proceeding, accompanied by the removal of oxidisable substances from the gobs, where practicable, commands itself to me. But to continue this course after a certain temperature has been exceeded, and much more when gob stink is first perceptible and white vapour visible, is a sure way of hastening the occurrence of a gob-fire. It cannot be too strongly insisted upon that nothing short of complete insulation of the gob can avail after it has attained a certain temperature. The preventive stage is over, and the remedial stage begins. The papers were ordered to be printed.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE ITALIAN IRONWORKS AND MINING CONCESSIONS COMPANY (Limited).—Object, examine and explore, and obtain reports upon and purchase or acquire the lands and hereditaments in the district of Tolfa, near Civita Vecchia, in Italy, together with the mines and quarries of iron, ironstone, iron ore, and other metals, and also the buildings and works at Terni, near Rome, now belonging to Frederick Lindheimer, and to enter and carry into effect such agreements with him as may be necessary, &c. Registered by Henry Kimber Elliott and Co., 79, Lombard-street, E.C. Capital 5000*l.*, divided into 1000 shares of 5*l.* each. The first subscribers are:—Frederic Carrel, merchant, Woolpack Buildings, Gracechurch-street, E.C. 10; Francis Fox, civil engineer, 2, Victoria Mansions, Westminster, 5; Francis Talloch, shipbroker, Windsor Chambers, Great St. Helens, 10; Charles D. Fox, civil engineer, 2, Victoria Mansions, Westminster, 10; H. Rockingham Gill, 61, Ludgate Hill, E.C. 1; Charles A. Head, Hartburn Hall, Stockton-on-Tees, 5; Thomas Wrightman, Norton Hall, Stockton-on-Tees, 5. Registered without Articles of Association.

THE HARTON COAL COMPANY (Limited).—Object, acquire and work the Harton, Hilda, and Boldon Collieries, in the county of Durham, with the various coal fields, mines, railways, and shipping places, the goodwill of the business, and all stock-in-trade and effects, and carry on the business of colliery-owners, ironmasters, and manufacturers of iron, steel, gas, bricks, coke, tiles, &c. Registered by Richard Jordan, 120, Chancery-lane, W.C. Capital 499,200*l.*, divided into 624 shares of 800*l.* each. The first subscribers (who take one share each) are:—C. L. Wood, Freeland, Perthshire; L. Wood, colliery owner, Southill, county Durham; J. Wood, colliery owner, Coal Exchange, E.C.; W. Wood, colliery owner, Coal Exchange, E.C.; C. W. Anderson, colliery owner, South Shields; Hilma Phillips, colliery owner, Newcastle-on-Tyne; C. E. Blackett, 10, Over Grange, Stamford. The first directors to be Charles William Anderson and Lindsay Wood. Qualification, 10 shares.

ARTHUR DASHWOOD AND COMPANY (Limited).—Object, acquire an agreement dated July 31, 1885, and made between Arthur Dashwood of the one part, and James Martin of the other part, for the purchase of the business of horticultural engineers now carried on by Arthur Dashwood, at 28 and 29, St. Swithin's-lane, and to purchase the business, and purchase or sell all iron or wire goods, pottery or stoneware, &c. Registered by James Martin, 157, Fenchurch-street, E.C. Capital 30,000*l.*, divided into 3000 shares of 10*l.* each. The first subscribers are:—John Freeman, Forest Lodge, Farnborough, Hants, 20; Joseph Clever, 54, New Broad-street, E.C. 20; Percy A. Pool, colonial agent, 4, Bishopsgate-street Within, 20; Walter William Whitehead, Beacon Lodge, Sevenoaks, 5; Alfred C. Blackall, 4, Bishopsgate-street Within, 1; P. Dashwood, surveyor, 75, Mark-lane, City, 10; J. Bacon Dashwood, 75, Mark-lane, E.C. 1. The number of directors to be not less than four nor more than six.

THE AMALGAMATED SULPHURIC ACID, COPPER, AND PHOSPHATE COMPANY (Limited).—Object, adopt and carry into effect three agreements, dated July 30, 1885, and made in the first between John Elphicks of the one part and a trustee of the company of the other part, in the second between James Russell of the one part and a trustee of the company of the other part, and in the third between F. J. Falding of the one part and the company of the other part, for the purchase of several mining rights in Canada, to work and develop mines and mineral properties, and carry on the business of miners, smelters, &c. Registered by Finnis and Wylie, 19, Surrey-street, Strand, W.C. Capital 300,000*l.*, divided into 15,000 preference shares of 10*l.* each, and 15,000 ordinary shares of 10*l.* each. The first subscribers (who take two shares each) are:—Walter Birk, merchant, 7, East India-avenue, E.C.; Richard Fernely, secretary, 4, Cophall Buildings, E.C.; E. H. Cannon, barrister, 4, Cophall Buildings, Temple; A. Lambert, merchant, 4, Cophall Buildings, Temple; John W. Mochon, Whalley Range, near Manchester; H. Hardy, Gordon House, Chiswick; J. M. Kelley, merchant, 12, Charlotte-street, Bedford-square, W.C. The number of directors to be not less than three nor more than seven. Qualification, 100 shares. Remuneration of directors 1500*l.* per annum, to be divided amongst them.

Trade Reports.

NORTH WALES, SALOP, AND CARDIGAN.

August 13.—An abstract of the paper by Mr. D. C. Davies, F.G.S., "On the North Wales and Shrewsbury Coal Fields," appears in the Quarterly Journal of the Geological Society, published this month. The paper itself was with the permission of the council withdrawn by the author, who was unwilling that portions of it which he deemed of vital interest to the local and general interest of the paper should be omitted. The paper will probably be published in *extenso* with the illustrations by another society. Lead mining in Denbighshire and Flintshire is at a low ebb. We hear but little of the explorations in the Llanarmon district and on Halkyn Mountain. Possibly there are not more than two mines in the whole of the two counties that are making profits. The advance in the price of lead may give some impetus to the industries, but the royalties, usually one-eighth of the value of the ore, are sufficient to crush all enterprise. In Montgomeryshire the only mine doing anything appreciable is the Van. In Shropshire, the Roman Gravel. In Cardiganshire, a couple of three mines in the south, and one in the north of the lead mining district. In Carnarvonshire there is not a mine working at a profit. This is not a pleasant picture. Happily for the men they have found work at other employments. The passing of the Manchester Ship Canal Bill has given considerable satisfaction in the district. It has, however, been suggested, and not without reason, that a better outlet for the canal would have been the River Dee, which route would have saved much of the costly litigation that has been incurred.

In the Slate Trade all the principal quarries are well supplied with orders. Stone quarrying in general is good, and there has been a resuscitation of work at two of the extensive limestone and marble quarries in Anglesea. The collieries keep employed, and there is but little loss of time. The same is true of the iron and steel works. In the Potteries the trade has been disturbed by the holidays and wakes which occur at this time of the year, and which do not seem to lack much interest, owing to the slackness of trade. To the employers they are at present a benefit rather than otherwise.

SOUTH WALES.

August 13.—The Bank holiday and its results helped to cripple the amount of coal shipped last week at all the ports. At Cardiff there was a falling-off of 18,000 tons, the amounts having been 123,129 tons foreign and about 22,000 coastwise, with 2620 patent fuel; Newport, 25,360 tons foreign and 23,007 coastwise; Swansea, 12,404 tons foreign and about 11,000 coastwise, with 4490 tons patent fuel. The demand for small steam coal is still in excess of the supply, owing to the spasmodic working at many of the collieries. Prices, are if anything, a little weaker.

The dispute at Penygraig remains in the same condition as before, except that the men have given instructions to their solicitor to take proceedings against the company for the recovery of the wages due to them.

Work has been suspended at the Llantwit and Black Vein Colliery. By this step 400 men and boys have been thrown out of employment. Work has been resumed at all the Dowlais pits, but it is probable that another temporary stoppage may take place soon, owing to the vast accumulations of coal.

There is some improvement in the Steel Trade. The Tredegar Company have secured a large order from the Government for steel sleepers for India, while at Dowlais this branch of the works is busy in the same direction. Last week Newport shipped 2526 tons of iron to Madras, 1050 to Matanzas and Havannah, and 300 to Gothenburg; while Cardiff shipped one lot of 1100 tons. Iron ore is arriving in large quantities. Newport received last week 6300 tons from Bilbao, and 4045 from other places; Cardiff, 13,427 tons from Bilbao, and 2822 from other places.

Great efforts are being made to break up the arrangement of the manufacturers, but hitherto without success. There is evidently more determination and cohesion among makers than ever there was before. This is a good thing, as manufacturers and workmen must both profit by the process in the end, as their interests are identical. Stocks are being rapidly reduced. There are not more than 80,000 boxes in store now in Swansea. Manufacturers are asking 15s. per box for IC steel grades, and ternes are quoted at from 15s. to 16s. There is some agitation going forward to stop two weeks in every month, but it is believed no such arrangement will take place, the present one being quite satisfactory, and will prove to be the wisest in the end.

DERBYSHIRE AND YORKSHIRE.

August 13.—The dispute at the Cossall Colliery, near to Ilkeston, has not yet terminated, and there is now every appearance that such of the rioters as are found guilty of the attacks on the houses of the manager and the underground steward will be severely dealt with, seeing that there are no extenuating circumstances that can be pleaded on behalf of the rioters. In South Yorkshire the strike at Denaby Main was brought to a close by Mr. Chappell, who at the commencement of it was the secretary of the association, but who the men threw overboard in favour of Mr. Pickard, of the Yorkshire Miners' Association. Mr. Chappell has now the satisfaction of knowing that through his instrumentality the men, after undergoing great hardships, have been able to resume work, although on terms which they might have had immediately after they had struck. It is to be hoped that the services now rendered by Mr. Chappell in terminating the dispute will be recognised and appreciated by the men, who treated him in a most discreditable manner because he found it impossible to obtain from the owners of Denaby Main all that the miners demanded, and which it was impossible to concede.

In Derbyshire, trade remains in much about the same state as it was during the last week or two, but the tone is more cheering as regards coal mining, although short time is still the rule. Some of the collieries have recently done a very fair business with the Metropolis, but the prices have in no way improved. In the course of last month 23,700 tons of coal were sent from Clay Cross to the Metropolis, from Blackwell 12,600 tons, from Langley Mill 13,200 tons, and from Grassmoor 12,400 tons. Most of this was, of course, house coal, but that for gas purposes may now be expected to go off rather more freely. In hard or steam coal no material change has taken place, and there is not so much going away as could be desired, as most of the pits are differently situated to those in South Yorkshire, which are within a fair distance of Goole and the Humber ports. From these a large quantity of steam coal is exported to the home ports, as well as to those in the North of Europe. The opening of the Hull and Barnsley Railway should stimulate the colliery-owners in Derbyshire and Nottinghamshire to utilise the facilities offered by the Great Northern Railway Company by the line from Nottingham to Boston to make use of the latter, and raise it to the position of a coal-shipping port. It has advantages, to say the least, fully equal to any of the Humber ports, and is geographically situated to more than compete with the Tyne in

the shipping of coal for the London market. The collieries in the county of Nottingham send a good deal of coal to the London market by railway, Linby, Hucknall, and Annesley, each sending an average of 10,000 tons a month, but this, no doubt, could be greatly increased were advantage taken of the proposed sea route. In small coal the demand has been but moderate, and the prices below the cost of production. A good deal of small coal, however, is made into coke. Although the Derbyshire owners do not appear to give much attention to making coke, and so allow the furnaces to consume that made in South Yorkshire, a great deal of which is not only sent into the county named, but into Northamptonshire as well, although the carriage rate must be much higher from any part of the West Riding than it is from Derbyshire.

A moderate business is still the rule at the ironworks throughout the Midland field, but a fair tonnage of ironstone continues to be imported from different parts of Northamptonshire, Wellingborough taking the lead. The production, however, would appear to be in excess of the demand, still makers have not lessened the output, despite the fact that prices are exceptionally low for both forge and foundry qualities. There is not so much being taken by the millowners of Staffordshire as there was formerly, and the same may be said with respect to Lancashire as regards foundry pig in particular. The local consumption has kept up fairly well. The large foundries have turned out a fair quantity of heavy castings, more especially pipes for gas and water, but the works engaged in light and ornamental castings have been quiet for a considerable time past. Malleable material has been in tolerably steady request for some kinds of work, and the output taken altogether is fully as large as what it was in the earlier part of the year. At the forges the amount of rolled iron produced has not gone beyond the average.

In Sheffield, if trade has not materially improved, it has certainly not declined, and some few branches have shown to better advantage; but there are still a good many workmen only partly employed. The lighter branches are those which continue to be the worst off, and as some of these depend a good deal upon foreign orders the prospects for the next month or two at least are not particularly bright, yet the last quarter of the year generally finds some branches better off than the previous part of the year, and this no doubt will hold good in 1885. Business with America has not improved, although it has been quiet during the year so far, whilst continental orders have not come so freely to hand as was expected. The sheep-shear season, which may now be considered as over, is said to have been a very fair one, and there is of course not so much doing in agricultural implements and garden tools as was the case earlier, and the season for these may also be said to have nearly closed. In table and other kinds of cutlery, as well as edge tools, files, and saws, only a moderate business is being done on either home or foreign account. Bessemer rail makers—or some of them at least—are now fairly off for work, and a considerable quantity of the same description of steel is being taken for axles, springs, and other kinds of railway forgings, but not so much is going for the lighter kind of goods. The make of crucible steel has kept up to the average, and in addition to what is required for heavy castings and plates a considerable quantity is taken for the wheel branches, and also for mining and some other kinds of tools. The engine and machine works have not been busy for some time, but some of them manage to keep their men fairly going. Railway wagon builders are in about the same position as they were, having about sufficient work in hand to keep their workmen steadily going. Some of the foundries have done better of late in pipes, grates, cooking ranges, bright stoves, and various kinds of gas apparatus.

LANCASHIRE.

August 13.—A general stagnation of business still characterises both the Coal and the Iron Trades of this district with prices out down to the very lowest possible point. For pig-iron the enquiry is extremely small, with, if anything, a lessened weight of business coming forward in the market. Quoted prices for local and district brands remain at about 38s. to 39s. less 2½ delivered equal to Manchester, but there are sellers at about 6d. per ton under these figures. Outside brands, both Scotch and Middlesborough, are very low in price, and the best foundry qualities of Middlesborough iron are to be got at about 41s. 4d. net cash delivered equal to Manchester, with ordinary g.m.b.s. offering at about 1s. per ton under this figure. Hematites still meet with only a very slow sale, and 51s. to 51s. 6d. less 2½ represent the average figures at the good foundry brands can be readily got for delivery into this district. In the finished-iron trade, with the exception that one or two of the large makers are, at low prices, still doing a moderate weight of business, generally orders are very difficult to get, and 51s. 5s. for Lancashire and North Staffordshire bars delivered here is the full average basis of the present market rates.

Throughout the Engineering Trades a general slackening down of enquiry is reported. Locomotive builders are still kept fairly busy finishing work, but they have no calls of any weight upon them for the future. In railway rolling stock there is very little new work giving out, and this is very keenly contested for. A few of the tool makers are moderately busy, and boiler-makers are still kept fairly employed, but this is on old orders, which are running out much faster than they are being replaced. In both small engine building and heavy engineering work trade is in a depressed condition, and the shipbuilding trade, which was reported to be showing signs of revival, has disappointed the hopes of employers in this branch of industry.

For all descriptions of coal, house-fire, steam, and forge coals, and engine fuel, the demand continues extremely poor, with prices nominally unchanged, but where quantities have to be moved sellers are not very firm in adhering to list rates, and the tone of the market is weak. For house-fire consumption the demand still shows no enlargement upon the very limited demand for summer requirements, and the general depression in trade still reacts very seriously upon the requirements for the common classes of round coal for iron making and steam purposes; whilst engine fuel, notwithstanding the present very limited production of slack, continues plentiful in the market. At the pit mouth the average quoted prices remain at 8s. to 8s. 6d. for best Wigan Arley, 7s. to 7s. 6d. for second qualities, 6s. 6d. to 7s. for ordinary Pemberton Four-feet, 5s. to 5s. 6d. for common round coals, 4s. 3d. to 4s. 9d. burgs, 3s. 6d. to 4s. best slack, and 2s. 6d. to 3s. per ton for ordinary qualities. Pits throughout the district are only kept very irregularly employed three, four, and five days a week. Here and there collieries are fairly busy on shipping orders, but generally a falling-off is reported in the demand for shipment. For the better qualities of steam coal delivered at the High Level, Liverpool, or the Garston Docks prices remain at about 7s. to 7s. 3d. per ton.

On Monday the board of arbitrators for the northern manufactured iron trade sat at Darlington, with Mr. David Dale as referee. An attempt to agree upon a sliding-scale for settling wages failed, the men declaring that they would not accept a minimum which would reduce wages below the present point of 6s. 6d. a ton. The ironworkers, it was urged, would leave the trade if wages were made lower than was ever before known, being now below Staffordshire. It was decided that the question must go to arbitration, the employers to give notice of the reduction they required.

TYNE AND WEAR.

August 13.—There is not much change to note in the state of the Coal Trade here. The demand for best steam coals is still good, but that for second-class steam coals is only moderate. There is still an excellent enquiry for steam small coals. The gas coal trade is improving, but the demand for house coal continues very moderate. There is a steady good demand for coke for export, but that for inland consumption of the article is deficient. The late rise in the price of best steam coal is maintained; there is no change in the price of other descriptions of coal.

A conference of viewers and the miners' agents has been held at the Seaham Colliery, for the purpose of discussing the question now in dispute there between the miners and the agents, the men having alleged that the prices paid in several districts of the mine are below the county average. The men had also, as we noticed last week, given notice to cease work at the end of a fortnight. After both sides had stated their case the discussion was adjourned until a future meeting, and in the meantime the men agreed to withdraw the notices they had given to cease work.

We learn from Brown's Export List that the total exports from the north-east ports during the month of July was 1,262,097 tons against 1,313,902 tons in July last year, which gives a decrease of 51,805 tons. We must notice, however, that Brown's List only gives the shipment at Blyth as 57,266 tons, whilst the actual shipments, according to the harbour returns, is 76,000 tons. The difference is owing to the fact that the harbour accounts give the shipments to the end of the month, whilst Brown's List is from the Customs' Returns, and the latter give the last few days of the month in the following month's account. The shipments at Blyth (76,000 tons) are far in excess of the shipments at any former period in one month, and the shipments there are likely to be still further increased. Preparations are now making for shipping part of the coals from the Northumberland collieries in the Albert Edward Dock, at the Coble Dran, North Shields. Several large vessels have entered the Tyne this week, and some of them have entered this dock to discharge and load; amongst them the s.s. Niagara, of Liverpool, 3104 tons, also the s.s. Cramona, of Dundee, 3714 tons gross register.

The Iron Trade is still inactive, and prices are unchanged. No. 3 pig-iron is still offered at 32s. per ton, but a trifle less will be accepted for prompt delivery. The stock deliveries for last month show an increase of 9000 tons, which is more favourable than was expected, and the shipments from Middlesborough this month so far are also somewhat encouraging. Reports from abroad are still discouraging. Hematite pig-iron is dull at 42s. 6d. per ton at West Coast ports. Shipbuilding iron is a little easier, and many of the rolling-mills are working short time. Ship-plates are quoted 47. 10s. per ton. The demand for steel plates is very flat, and the steel rail trade is not improving. The great steelworks of Messrs. Bolckow and Vaughan, at Eston, have again been closed for a short time, owing to the small demand for rails, &c. The Coal and Coke Trades at Middlesborough are very quiet. The question of the loss of life at sea continues to attract much attention amongst commercial men and shipowners, and the opinion of that class of men appears to be that the charges made against shipowners were not grounded in fact, and that the result of the Commission so far shows the need for a better system of official supervision if the figures of the officials are to be made the basis of popular agitation. But, on the other hand, the feeling amongst the general public is that it is desirable that shipowners should now devote attention to schemes for reducing the heavy loss of life at sea, and attention should be drawn to the want of facilities for the proper training of mercantile seamen and officers for their instruction in the art of navigation and for the proving of a supply of seamen in a manner different to that in which a "scratch" team is now got together. It is not possible to ignore the fact that the loss of life at sea is excessive; it is, perhaps, possible that the figures given by Mr. Chamberlain may not be quite correct, but the fact is patent to all that the loss is very serious, and if it is possible by any means to reduce the number of lives lost these means must be adopted. The question of insurance is a vexed one, but it is clear that a shipowner ought not to have the chance of making a profit out of a vessel lost, and if a vessel could not be insured up to her full value it is only reasonable to suppose that the safety of life at sea might be increased.

The adjourned meeting of the Arbitration Board for the manufactured iron trade in this district was held on Monday at Darlington, Mr. Whitworth in the chair. Mr. Trow stated the case for the men. The Chairman said that the answer of the men from the majority of the works was that they were willing to go to arbitration on the wages question as a whole, but not to arbitrate on a sliding-scale basis, unless the present rate of wages were accepted as a minimum, and 2s. above shillings for pounds as a basis for a scale, or a minimum increase of 6d. per ton in puddling above the basis of the old sliding-scale. The referee, Mr. Dale, having taken the chair, made some remarks, and the question was discussed at some length. It was then agreed that Mr. Dale should hold a conference with the operatives, whose views he afterwards communicated to the employers, with whom he also conferred privately. On the reassembling of the Board the referee said that he had told the employers from the men that he thought it was possible to bring about the establishment of a sliding-scale upon the basis of 1s. 9d. above shillings for pounds if the present wages were made a minimum, a point for which the men stipulated. He called upon the masters to state their views. Mr. Head said they could not agree that the present rate of wages should be a minimum, seeing that they were seeking a reduction. They would, therefore, have to go to arbitration on the wages question by the ordinary rules of the Board, and they would put in their claim in due course. The referee said that he had wished for a better result, but hoped that the arbitrators' proceedings would be conducted with the usual candour and good feeling.

END OF THE DENABY MAIN STRIKE.

The strike which commenced at the Denaby Main Colliery last Christmas terminated on Wednesday. The managing director (Mr. J. Buckingham Pope, barrister, Hull) met Mr. W. Chappell (late secretary of the now defunct South Yorkshire and North Derbyshire Miners' Association) on behalf of the men, and after a rather prolonged interview agreed to the resumption of work by the old hands. It is understood that the men have virtually consented to return to the mine on the terms against which they have for so long been agitating. It was expected that many of them would commence on Thursday. The news of the settlement produced much rejoicing not only amongst the evicted families, but amongst the tradespeople of Mexborough, to whom the prolongation of the dispute has proved most disastrous. It is believed the families will now soon quit the tents in the fields at Mexborough, and will return to the company's cottages at Mexborough. When the strike commenced 1200 houses were thrown idle, and the bulk of these were married men.

At Barnsley, on Monday, 46 boys were fined 8s. each, reduced damages and costs, for neglect at the Carlton Main Colliery, South Yorkshire, in consequence of which the mine had to be set down.

Meetings of Public Companies.

NEW COOK'S KITCHEN—A CALL OF 6s. PER SHARE.

A four-monthly meeting of shareholders in New Cook's Kitchen was held at the account-house on the mine, on Thursday.

Mr. WALTER PIKE (the purser) in the chair.

The statement of accounts showed that the labour costs amounted to 850l. 1s. 9d.; merchants' bills, 246l. 16s. 6d.; bank charges to June, 88l. 10s. 8d.; total expenditure, 1185l. 8s. 11d. The credits were—Copper ore sold, 320l. 7s.; tinstone sold, 192l. 12s. 6d.; total receipts, 512l. 19s. 6d., leaving a loss on the 16 weeks' working of 672l. 9s. 5d., and increasing the balance against the adventurers to 2784l. 16s. 7d.

Capt. JOSIAH THOMAS (the manager) stated that they had a good copper lode in the mine, but the price of copper ore was very low—not more than about half the price it was three years ago.

The agents (Capts. Josiah Thomas and W. Thomas) reported that the 175 cross-cut north, which they referred to at the previous meeting as having been started to intersect the north lode, was driven 26 fms. north of the lode on which they had previously been driving west. About 3 fms. behind the end they passed through a lode 24 ft. wide, which produced some good stones of tin. They had not opened on that lode, as they thought it not advisable to continue the cross-cut to the north lode, which they believed could not now be more than 3 or 4 fms. distant, and which had been so very productive in other mines to the east of them. There were other known lodes further north which had only been seen at shallow levels, and which they thought it most desirable to intersect also at the 175, which was at a good depth for proving the various lodes. They were driving at the rate of about 6 fms. per month. In stopping the engine lode above the 160 east of engine-shaft they had found it to be much larger as well as more productive than they had found it in driving the level. It was fully 9 ft. wide, and worth for tin and copper 30l. per fathom. The stope below the 148, on the engine lode, was worth for tin and copper 15l. per fathom. Their principal hope was in exploring the various lodes in the western part of the mine towards the great cross-course, where they are almost entirely unexplored.

The accounts and report were passed, and a call of 6s. per share was made.

SOUTH CROFTY—A CALL OF 18s. PER SHARE.

A 16-weekly meeting of adventurers was held on the mine, on Thursday.—Mr. H. J. LEAN (the purser) in the chair.

The financial statement to the end of July showed [the labour costs to be 1935l. 5s. 3d.; merchants' bills, 1089l. 12s.; Carn Brea water charges, 20l.; bankers' interest and commission, 103l. 3s. 11d.; total expenditure, 3148l. 1s. 2d. On the credit side there was for 25 tons 9 cwt. tin sold 1208l. 18s. 2d.; arsenic, 105l.; copper, 10l. 0s. 10d.; Cook's Kitchen, for crushing ore, 3l. 5s.; extra carriage, 1l. 9s.; total receipts, 1328l. 13s. The loss on the four months' working was 1819l. 8s. 2d., which increased the balance against the adventurers to 5902l. 4s. 6d.

The PURSER stated that the accounts were charged up as closely as they possibly could be to the end of July. The loss was slightly less than at the previous meetings.

The agents (Captains Josiah Thomas, W. Pascoe, and J. M. Phillips) reported that Palmer's engine-shaft was completed cutting down and enlarging to the 205 fm. level in two months after the last meeting. They had since sunk the shaft nearly 7 fms. below the 205, which was at the rate of 3½ fms. per month; and at this rapid rate of sinking they would not be long in reaching the 220 fm. level, where they could open on the middle and north lodes, which would then be probably near each other, if they did not actually effect a junction, and where they had great hopes of meeting with an improvement. Owing to their cutting down the engine-shaft and putting skip-road therein, they had only been working one stope during the past four months. The 205, west on the middle lode, passed through productive tin ground for 20 fms. in length, and as soon as the plat was finished in the 205 and the skip-road completed to that level this ground would be available for working. They would continue the sinking of the engine-shaft as rapidly as possible, believing as they did that the best chances of meeting with success were by deeper sinking, where the mines to the east had been so productive.

Captain JOSIAH THOMAS (the manager) remarked that in consequence of the cutting down and enlarging of the shaft the costs were heavier than they otherwise would have been during the last few months. This would also account for the returns of tin not being larger. The costs, however, were on the whole about 800l. less than at the previous meeting. They might meet with a great change in the mine at any time as they were going down in unexplored ground. He anticipated a reduction in their expenditure during the ensuing four months.

The accounts and agents' report were adopted.

On the motion of Mr. BAILEY (London), seconded by Mr. GEORGE WILLIAMS, a call of 18s. per share was made.

This terminated the proceedings.

RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

The ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Tuesday last.—Mr. GEORGE HOPKINS, C.E., the Chairman of the company, presiding.

Mr. HUBERT AKERS (the secretary) read the notice convening the meeting.

The minutes of the general meeting held on the 8th July, 1884, and also the minutes of the half-yearly meeting held on the 2nd December last, were read and confirmed.

The report of the directors, and the statement of accounts were taken as read.

The CHAIRMAN said: Gentlemen, we should have called you together much earlier but we were in hopes that we should be able to announce to you a complete and final settlement of all matters relating to the Albion suit. We have been waiting for that, but we felt that we could not postpone calling you together any longer. You will see that the appeal case, which has been in abeyance about three years, was heard at Washington last April, when the Supreme Court sustained the decision of the Court below, and sustained the case as put forward by the Albion Company, which had the effect, of course, of perpetuating the ejectment of the Richmond Company from the disputed ground. The question of damages was not before the Supreme Court. That has to be settled by the Courts below, and we were in hopes that by the time we had our meeting that question would have been settled, and we should have had the pleasure of announcing to you that this troublesome and tedious litigation was at an end. However, as I mentioned, at this moment the matter is still *sub judice*. Attempts have been made to settle it out of Court, but not successfully. Therefore the matter remains just where it was. With reference to the mine, we have been working very steadily, and, all things considered, very satisfactorily; with the exception of five or six weeks, when the works were closed down for repairs, the furnaces and refinery have been running continuously. The profit for the year, as compared with the previous year, shows an increase of about 5000l. This is due, to some extent, to economies which have been introduced in working. The mining expenses, for instance, have been reduced from 51583 per ton (at which they stood last year) to 51175 per ton, which is a very considerable reduction. The smelting expenses have been reduced from 51172 per ton to 51030 per ton. The refinery expenses, I believe, are about the same. But whilst I am on this point I must also add that I think a considerable portion of the additional profit we have made this year is due to the successful treatment of the speiss by Mr. Probert. You will remember I explained to you at a previous meeting that he had invented and patented a method of dealing with this, which has hitherto been thought a refuse material—dealing with it successfully, and obtaining from it a considerable amount of gold and silver, which we had not before been able to obtain in

any other way. The explorations have not been very extensive; in fact, we have spent a very small sum of money on explorations this year; but, small as they have been, they have been attended with very considerable success. I am pleased to be able to tell you that in and about the 300 and 400 levels, we have opened up very considerable bodies of ore. What the exact amount is I do not know, but the amount is considerable, and the quality of the ore is very good. Now, I need not weary you by going through the figures, I think, because they are set forth in great detail in the accounts, and speak for themselves. We have an item this year which we have carried to capital expenditure, that is the amount which was standing in the revenue account last year as an item of suspense—namely, the cost of the purchase of the Williamsburg Mine. You will remember that we purchased that some two or three years ago, and hitherto it has not been carried to the capital account; but we thought it better this year to close that account, and to carry the amount which it cost us to capital—that is to say, we have paid for it out of revenue, although it is strictly a charge which is chargeable to capital. Still we have charged it to revenue and not to capital, because we have always gone upon the principle of whatever expense we have incurred, or whatever purchase we have made, of not increasing the amount of our capital. (Hear, hear.) I am very sorry to say that there is a very large sum expended in legal expenses. That, also, we have taken out of the revenue of the year; and the result of the year's working is that, whilst we keep the reserves as they were before (58,102l.) we carry forward to the next year 26,971l., as against 17,093l. carried forward last year. Well now, gentlemen, it is a little hard, I think, that, having earned a dividend, we are not in a position to pay one. You see we have, in round numbers, 27,000l. standing to the credit of revenue, and yet, because the amount of the damages in this Albion suit is not yet ascertained, the directors feel that they could not, under the circumstances, recommend the payment of any dividend. Until that amount is ascertained, I think you will agree with me it would be very unwise and very unbusiness-like, to divide our profits. (Hear, hear.) With reference to the important question of the price of lead, I am very happy to say that, at last, lead has taken a favourable turn. It seemed at one time as if it was going to remain at the low price at which it has been for so long a time, and never to get any better; but we have lately sold the 1800 tons which we had stored in New York, and lead has now increased in price from about 3½ per 100 lbs. (at which it has stood for a long time) to about 4½; that is 4½ cents per lb., or very nearly about 20l. per ton English. I do not know what arrangement our manager and agents have made for the remainder of the lead in stock; but we have impressed upon them on several occasions the advisability, and in fact the necessity of reducing that stock—(hear, hear); and I think now that the price has increased it will be wise for us to do so. We cannot, of course, place such a large quantity as we have on the market at once, because it would simply have the effect of breaking the market, but the directors, all of them, think that we ought to reduce the quantity we have to the lowest possible amount. In times gone by I know we made a very large profit by holding our lead under some very exceptional circumstances, when it went down to as low as 3 c. per lb., and actually we sold some in June, 1879, for as little as 2½ c. per lb., but by keeping the remainder of our stock 12 months we sold it at 6 c. per lb., or more than double the price it was the year before; and Mr. Broughton has reminded me, to put it in a familiar way to you, that when speaking of so many cents per lb. I might tell you that every 1 c. per lb. means 4l. per American ton which is the short ton of 2000 lbs. to 1 ton. Therefore, in 1880, by holding our lead, we made an increased price of 12l. per ton on the whole stock we had. That no doubt has been a great inducement to deal with the stock of lead we have in the same way. Unfortunately the lead market has been very low, and has remained very low for a long time. It has now taken a start, and lead is quoted to-day at 4½ c. per pound in New York. And, therefore, I hope we shall see lead go still higher than that, and meanwhile we shall feel it our duty to impress upon our agents in Nevada the necessity of reducing our stock as much as possible. (Hear, hear.) Well, gentlemen, with this report and these accounts before you I do not know but what I should be wasting your time if I were to keep you very much longer; they speak for themselves, and set forth in detail everything on the face of the accounts. Therefore, I formally move the reception and adoption of the report and accounts, but before putting the motion I shall be happy to hear any observations which any shareholder may make, and answer any questions in reference to the same. (Cheers.)—Mr. BENJAMIN BROUGHTON (Deputy-Chairman): I beg to second the motion.

Mr. BRAND: In glancing over this balance-sheet I think I may safely state that it is one of the most satisfactory documents I have ever seen. But I would just call attention to the general balance-sheet, which is the last on the page. In that you will see on the debit side, which is a very unusual thing, you have actually to add it to all the assets on the other side (with the exception of 1822l. 6s. 6d. for sundry creditors, sundries at Eureka and London, unpaid dividends and income tax), so that really, Mr. Chairman, the state of the assets, together with the balance, and including the reserve fund, actually amount to nearly double the sum, or say, in round figures, 160,000l. odd. Now, gentlemen, I do not think I ever saw a more satisfactory account in my life; with the exception of 1822l. 6s. 6d. the whole of the assets on the debtor side are to be added to the other side, so that it forms an amazing amount. I am very sorry, Mr. Chairman, you do not feel it justifiable, under present circumstances, to recommend a very handsome dividend. I should have said that 1l. per share might have been paid with the greatest safety. Of course I am open to any explanation which the Chairman or directors may please to give. Before I sit down I request to be informed what is more or less the actual amount of placing the lead in New York, together with commission or brokerage if sold, so we may be enabled to estimate the value of the lead, for I see you have estimated it here at a very low figure indeed. Indeed, so much so that instead of being 79,000l. or nearly 80,000l., I estimate it at 120,000l. odd. I should like to be in possession, if you please, of the details to guide me in forming a more accurate opinion of the state of the assets.

Mr. BENJAMIN BROUGHTON: I think the gentleman is under a little misapprehension. I presume that, in addition to the assets on the credit side of the accounts, he looks upon the reserve fund of 58,102l. as also an asset?—Mr. BRAND: I have included it, but not as distributable.

Mr. BENJAMIN BROUGHTON: But I may explain that the 58,060l. of reserve fund is not in cash, nor is the balance of revenue account, but both are invested in the bullion and in the stores on hand. Therefore, the reserve fund is not an additional asset, which I take to be your view of the question.—Mr. BRAND: Precisely.

Mr. BENJAMIN BROUGHTON: In that, I think, you are under a mistake. The 58,000l. odd of reserve fund is invested in the bullion and stores on hand, and consequently is not an additional asset.—Mr. BRAND: I was not aware of that.

Mr. BENJAMIN BROUGHTON: I simply say these few words by way of explanation.

The CHAIRMAN: I think Mr. Broughton has answered the principal portion of your enquiry. It is as Mr. Broughton has stated. You will see you cannot take the amount twice. Whatever we really have as assets, whatever shape it may be in, be it in gold, silver, or lead—whatever the amount is the total appears on the debtor side, 86,895l. 11s. 10d. That is the amount standing in favour of the company at the present moment. The cost of the shipment, &c., of lead from Eureka to New York is about 8l. 5s. per ton. You are quite right in this respect that we have brought the lead into the balance-sheet at a comparatively low price, seeing what it is to-day—that is to say, we have brought it in at 4 cents per lb., whereas the price is now 4½ cents per lb. to-day; but we never like to over-estimate the assets if we can help it. (Hear, hear.) We always find ourselves below the mark than over the mark. But for the litigation the amount which we might fairly have divided is the last item in the balance-sheet—the 26,971l. 5s. 4d., which does represent about 10s. per share. Of course the reserve fund we always like to keep intact. We never wish to interfere with that if we can possibly help

it. We have never done so hitherto. I do not know whether any other gentleman would like to ask any questions.

Mr. LEAKE: I should like to call attention to the large amount paid in the way of interest to the bullion agent—4249l. 2s. 3d. I assume that is paid to him for advancing large sums continually until the bullion is realised? Would it not be better to cease dividends altogether until we get a little ahead of our expenses in that way? 4200l. odd for interest is really interest upon advances of 100,000l. No doubt they charge the usual percentage paid out there, but I think we are forestalling our income and getting advances continually, for I see the item last year is about the same. It is about 4000l. each year. I suppose it will be a long time before we get the 26,000l. odd to the credit of revenue in cash, and we must still borrow from the bullion agent?

The CHAIRMAN: I will explain at once. The item of interest is, of course, a heavy one; but, perhaps, the hon. proprietor does not know that 1 per cent. per month in California is the legal rate of interest. We do not pay so much as that; the amount is considerably less. You will observe, if you compare it with the figures of last year, that whilst our agent has advanced us, against our stocks in hand, 57,865l., against 114,000l. (which is about one-half), if you will look in the corresponding period of last year you will find we had an advance of 73,000l., against 109,000l. of assets. Of course this question of interest, again, is mixed up with the holding of lead. Reduce your stock of lead and you reduce the interest you pay to the bankers; and I hope, seeing what has taken place, that that stock of lead will be reduced, at all events, sufficient to clear off the advances made by our agent. The interest is large, of course—4000l. in the year, but you will see that our turnover is very large. If you turn to the report you will see that we have actually received during the year for sales not less than 187,000l. Therefore, we have a very large turnover, and although that item of 4000l. for interest is a large sum, still it is not very large in comparison with the amount of business which we do.

Mr. MOYLE: The Chairman said with respect to the profits of the year, that if it had not been for the wretched law-suit the directors would have been in a position to divide 10s. per share, and with respect to the market generally there was an impression that it would be so.

The CHAIRMAN: I was not aware of it.

Mr. MOYLE: On the Stock Exchange there must have been a very strong impression that the Richmond Company would pay such a dividend, because, as a matter of fact, the shares rose very rapidly indeed; but the moment the report came out they dropped by the amount they had risen. That, I think, explains that the outside public considered that, under the circumstances, the directors would have been justified in paying a dividend. I think the directors are the best judges, perhaps, of whether a dividend should be paid or not.

Mr. SNELL: I was late in coming in, and did not hear all the observations. When was the appeal heard?—The CHAIRMAN: Last April.

Mr. SNELL: Have the Albion Company obtained an order for a new trial, and if so when will it come on?—The CHAIRMAN: The Albion Company have obtained an order for a new trial, and it is the Richmond Company which are appealing against that order. We are told we may expect the appeal to come on some time in September. With respect to the remarks of the hon. proprietor I do not know whether he is aware or not that some years ago the shareholders gave discretion to the directors of this company to declare dividends when they thought fit; and I think that if the directors have been guilty of one thing more than another it is that they have been apt to declare dividends too frequently. I merely mention that to assure the honorable proprietor that if we could have seen our way satisfactorily to declare a dividend we should have done it before this, and not have waited for the meeting, because we have the power, and it is in our discretion to declare dividends without asking the consent of the shareholders in general meeting. But assured that the instant we see our way to declare a dividend we will take care to do it. Now, gentlemen, if no one has any other question to ask I will put the resolution.

Mr. HART: You have not told us much about the present state of the mine. The law-suit has got rid of; the question is about the state of the mine.

The CHAIRMAN: The only thing I have to say about the mine is that we have got some very good bodies of ore about the 300 and 400 levels. That is about all I have to say about the mine. We have not had years such as we used to have, and we should have made a moderate profit of about 35,000l. if we had been left alone. Now, gentlemen, it has been moved and seconded that the report and accounts be received and adopted; as many of you as agree with that opinion will signify the same in the usual way.

The resolution was carried unanimously.

The CHAIRMAN: The next business is the re-election of directors. I have much pleasure in proposing that Mr. Robert Wilson be re-elected a director of this company.

Mr. B. BROUGHTON: I have pleasure in seconding the nomination of that gentleman.

The motion was carried.

Mr. B. WILSON: Gentlemen, I have to thank you for re-electing me as a member of this board, and I can assure you that I shall study your interests to the best of my ability.

The CHAIRMAN: I have now to move that Mr. Edward Bower be re-elected a member of this board. Mr. Bower has been with us a great many years—indeed, from the commencement of the company, and he attends most assiduously to his duties; and in saying that I do not mean to say that Mr. Wilson does not do the same, although I omitted to say so just now. I have great pleasure in moving that Mr. Bower be re-elected.

Mr. B. BROUGHTON: I have great pleasure in moving Mr. Bower's re-election.

The motion was put and carried.

Mr. EDWARD BOWER: I beg to thank you, gentlemen. It will be my endeavour to serve you to the best of my ability.

The CHAIRMAN: Will any gentleman propose the re-election of the auditors?

Mr. SNELL: I propose the re-election of the auditors, Mr. George Broom and Mr. James Fraser, with the same remuneration as before. They make the accounts very plain.

Mr. HART: I will second that.

The motion was carried.

The CHAIRMAN: Gentlemen, before we separate we should pass a vote of thanks to Mr. Probert and the staff out at Eureka. Although not present I am quite sure that it will be satisfactory to Mr. Probert, amidst all the worry and troubles which he has to contend with, to find he is not forgotten. (Hear, hear.) It is no fault of Mr. Probert that you have not a dividend—I will not say to-day, but some months ago. I assure you he looks after your interests indefatigably. These law proceedings are a source of continual worry to him. He only wishes that he could be let alone to look after the mine itself; but, unfortunately, from the very commencement of this company it seems to have been involved in litigation, and all you can say is that the Richmond Mine has been a success in spite of it. (Hear, hear.) I do hope that we see something like an end of these law proceedings. We have been waiting these years for a verdict. It is given against us. I accept it cheerfully as I assume is right and just. The sooner the question of damages is settled the better for all of us. I hope some one from the body of the room will second the vote of thanks to Mr. Probert and his staff.

Mr. CHOWFOOT: I second that.

The CHAIRMAN: I will put it—"For the energetic way in which they have conducted the affairs of the company."

The resolution was carried unanimously.

Mr. SNELL: Gentlemen, there is one duty we have to perform before we separate, which is to propose a vote of thanks to the Chairman and directors of the Richmond Company for their efforts and respect to the company during the past year. (Hear, hear.) I am very glad to hear the Chairman propose a vote of thanks to Mr. Probert and his staff in America. Only those persons who are connected with America can know the difficulties that persons have to contend with in dealing with a foreign company, especially when

as in this case, litigation is proceeding. I am sure it must strengthen the hands of our agents abroad to receive such an expression of the confidence of the shareholders as has just been given. I do not think we should allow the present meeting to pass over without recording our sense of the valuable services rendered by the directors during the past year, as in years before. (Hear, hear.) Therefore, I propose a vote of thanks to the Chairman for his conduct in the chair, and to the directors for the conduct of the business.

Mr. HART: I have pleasure in seconding that.

The motion was carried.

The CHAIRMAN: Gentlemen, on behalf of my co-directors and myself I beg to thank you most sincerely. You have always been so kind and considerate to us that it really is a pleasure to work for the Richmond shareholders. I need not tell you that the great bulk of the work must of necessity be on the other side, and there, as this gentleman has said, are the troubles, the worry, and the vexation. We only get them over here, to a great extent, second hand, when we cannot do anything sometimes to alter the thing; but I assure you, for myself and for my brother-directors, that so far as we can in any way aid or assist the undertaking and look after your interests you may depend upon our doing so. (Cheers.) I am much obliged to you.

The proceedings then terminated.

PRINCE ROYAL MINE.

A general meeting of shareholders was held at the offices of the company, Gracechurch Buildings, Gracechurch-street, on Thursday, Mr. J. Y. WATSON (the Chairman) presiding.

Mr. C. B. PARRY (the secretary) having read the notice convening the meeting.

The CHAIRMAN said: This meeting has been called to settle the Share List only, and before doing this I wish to give you a few words of explanation. The sett was offered to me at a high price some years ago and declined. A few months ago Mr. Pike wrote to me to say he had been negotiating for the purchase of the lease, and that if obtained it would be a valuable acquisition to the shareholders of East Blue Hills, and the price asked he said was 500*l.*, 250*l.* to be paid in cash and 250*l.* in shares, with 2*s.* 6*d.* paid, and without the shares the owners of the lease would not sell at all. I then agreed to join in the purchase, taking the whole risk with Mr. Pike, on the distinct understanding that the 10,000 shares should be offered *pro rata* to every shareholder in East Blue Hills, and that any shares refused and not taken up should revert to Mr. Pike and Messrs. Watson on payment of the 2*s.* 6*d.*, the property having been obtained by them at considerable trouble without assistance, or fee, or reward. It is for the shareholders to confirm or otherwise this arrangement. I would add that to get the lease assigned and enrolled at the office of the Duchy of Cornwall it was necessary to form a cost-book which was signed by holders of 8400 shares, and to appoint a committee to accept assignment of lease, and carry out the issue of shares, &c., and that myself and the Right Hon. G. Cavendish Bentinck, M.P., were appointed, and will hold office till the first ordinary general meeting of shareholders. One or two shareholders have thought that the unissued shares should be again offered to the East Blue Hills holders *pro rata*, but there is this difficulty—many originally entitled to their proportion have sold out, and some of those who are now shareholders in the Prince Royal were not shareholders, I understand, in East Blue Hills. Again, if the shares are offered for sale no buyers would be found at a premium for such a large number, and the price would be knocked down to par. After stating these few facts, I beg to say that Messrs. Watson leave the matter, so far as they are concerned, entirely in the hands of the shareholders. So does Mr. Pike, who has written a letter which will be read to you; and proxies for 2000 shares have been sent up to support his view. The following is the agent's report of the mine and its prospects, the Balduh lode referred to being the rich lode of East Blue Hills:—

August 11.—The work now being done is as follows:—In the eastern part of the mine an old adit has been taken up from the valley and driven some distance west on the Balduh lode; this level is being cleared out, but not sufficiently as yet to get into the end. An old stall has been broken down and completely filled the level at the point just reached. Those old workings indicate very plainly that tin-stuff has been taken away from here at some former period. In the western part of the mine another adit has been taken up from the same valley and extended north a long distance towards the Balduh lode, but has not reached it by probably some 30 fms. Two or three shallow shafts near its mouth have been broken in, choked the water, and prevented ventilation. These are now being cleared out, and may occupy a fortnight in doing. In the meantime two men are employed in driving the cross-out north, and after the full number of men can be employed here I think the lode may be reached in about six months, and at a depth of 25 to 30 fms. from surface. It may be well to state that this Balduh lode has been worked on, and nearly all taken away above the adit level, through nearly a mile in length, in the three adjoining mines to the west of this point, and has yielded from time to time a great many thousands of pounds worth of tin. In the easternmost end now at work on this lode—the adit end in the East Blue Hills Mine, the lode is of a most promising kind, and worth 7*l.* per fathom; therefore, I consider, on the whole, the prospects of this mine are most encouraging. —S. BENNETT.

Mr. Pike's letter, which I have referred to, is dated from Camborne, and is addressed to me as follows:—"Dear Sir,—As you are aware, it took much time and very considerable difficulty to affect the purchase of this sett, and, believing in the mine I was satisfied, as recompense for this work, to be allowed to take up some of the shares that the shareholders in the East Blue Hills refused. I trust the meeting will see it in this light. Although claiming as a right the shares so refused, I am willing to leave the decision of their disposal in the hands of the meeting which you have convened for that purpose. Capt. Bennett sends you a report of the mine, and it is a great point that within two months or so we shall have two points working in the Balduh lode at a depth where it made tin in East Blue Hills.—WALTER PIKE." The following telegram has been also received this morning:—"From Bennetts, Prince Royal, to C. B. PARRY, 79, Gracechurch-street—Eastern adit cleared through first break to another break 30 fathoms ahead; ground stoped for tin in many places." The facts are now before the meeting, and it is for them to come to some decision. As I have stated, I have proxies for 2000 shares for Mr. Pike.

After some little discussion, Mr. WILLIAM SIMMONS moved, "That out of the shares declined by the East Blue Hills shareholders, as offered to them *pro rata*, 1000 be allotted to Mr. Pike and his nominees on payment of 2*s.* 6*d.* per share, and the balance of 983 be held in reserve till the next general meeting."—Mr. G. J. WAGSTAFF seconded the resolution, which was carried unanimously, and the proceedings terminated.

KOHINOOR AND DONALDSON CONSOLIDATED MINING COMPANY.

An extraordinary general meeting of the holders of B debentures was held at the offices of the company, Mansion House Chambers, Queen Victoria-street, on Monday.

Mr. GEORGE HOPKINS (the Chairman) presiding.

Mr. W. H. ROWE (the secretary) read the notice convening the meeting.

The CHAIRMAN said:—At the previous meeting he explained the necessity there was for the course they had taken, and what it was proposed to do with the money when raised. He did not, therefore, now propose to trouble them with any observations, as the present meeting was simply called for the purpose of confirming, if they thought fit, the following resolution, passed on the 23rd of July last:—

"That the conditional agreement submitted to this meeting, which agreement is dated 9th July, 1885, and made between the Kohinoor and Donaldson Consolidated Mining Company (Limited) of the one part, and William Walker Urwick of the other part, be and the same is hereby confirmed and approved, and that the rights of the holders of the B debentures of the company, secured by the indenture dated

the 7th day of August, 1884, and made between the company of the one part, and John Elliott and another of the other part, be modified accordingly, and that the trustees or trustee of the said indenture be and they are hereby authorised to give effect to the said agreement."

Major COTTON remarked that there was one thing he did not understand. There was a very heavy draw on certain debentures, and he wished to know whether these new pre-preference debentures would be paid off in full before those draws?

The CHAIRMAN replied in the negative. The pre-preference debentures were proposed to extend over a period of five years, subject to one-tenth of them being drawn annually.

Major COTTON observed that those people who paid their money in order to save the company ought to have it back again in full before anyone else.

The CHAIRMAN said he did not think it amounted to very much. Suppose the mine was making a large profit?—Major COTTON: But suppose it is making a small one?

The CHAIRMAN: They should take the two positions. Suppose they made a large profit, they would be able to pay a quota of the pre-preference, and also the other obligations they were under. If the mine continued to make a large profit the remainder would be secured. On the other hand if the mine did not answer their expectations, of course the whole of the undertaking would become vested for the holders of these pre-preference debentures, who would take everything. The directors thought first of all to make these debentures extend over three years only, but they found that just about that time there were large commitments of other debentures. Although it was quite true that the holders of the new debentures were entitled to pre-preference, the directors still thought that the holders of the other debentures which would be falling due at that time were entitled to great consideration. Although nominally and actually the new debentures would be a first charge in front of them, still they did not want to depreciate the other debentures unnecessarily.

Mr. JOHN WALKER enquired whether the new debentures would be paid off at a premium?—The CHAIRMAN said they proposed to issue them at par, and also to give a premium of 10 per cent. on those drawn.

Mr. WALKER was of opinion that as they would bear 10 per cent. interest, and would rank first, they should not have any premium.

The CHAIRMAN said the directors hoped the present debenture-holders would themselves take new debentures, and if they were a little liberal it was only taking out of one pocket and putting into the other.

Mr. JOHN ELLIOTT remarked that the board had received strong letters from many large shareholders saying that they had not offered enough. His opinion was that the security was splendid; but they had steered a middle course. He would have preferred that the money should be raised at 7 per cent.

The CHAIRMAN said his own impression had been and still was, that 10 per cent. should have been sufficient, but he had had a great many letters himself from shareholders saying that unless the board offered a bonus on the drawn bonds they would never get the money.

Mr. GEORGE HEIRON remarked that it was a question of 80*l.* a year. After some further discussion the resolution was agreed to with one dissentient.

An extraordinary meeting of the holders of A debentures was then held, at which the following resolution was confirmed:—

"That the conditional agreement submitted to this meeting, which agreement is dated 9th July, 1885, and made between the Kohinoor and Donaldson Consolidated Mining Company (Limited) of the one part, and William Walker Urwick of the other part, be, and the same is, hereby confirmed and approved, and that the rights of the holders of the A debentures of the company, secured by the indenture dated the 3rd day of January, 1884, and made between the company of the one part, and John Elliott and others of the other part, be modified accordingly, and that the trustees or trustee of the said indenture be, and they are authorised to give effect to the said agreement."

An extraordinary general meeting of holders of original debentures next took place, when the following resolution was confirmed:—

"That the conditional agreement submitted to this meeting, which agreement is dated 19th July, 1885, and made between the Kohinoor and Donaldson Consolidated Mining Company (Limited), of the one part, and William Walker Urwick of the other part, be, and the same is, hereby confirmed and approved, and that the rights of the holders of the original or first debentures of the company, secured by the indenture dated the 12th day of October, 1882, and made between the company of the one part, and John Elliott and others of the other part, be modified accordingly, and that the trustees or trustee of the said indenture be, and they are authorised to give effect to the said agreement."

A vote of thanks to the Chairman closed the proceedings.

THE NORTH MEXICAN SILVER MINING COMPANY (LIMITED).

A meeting of debenture-holders of this company was held at the Cannon-street Hotel, on Monday, to authorise the passing of a preference loan for 20,000*l.*, bearing interest at the rate of 7 per cent. per annum.

Mr. ANTHONY PULBROOK said that as this was a meeting of the debenture-holders it was desirable that one of the trustees of the debenture-holders should act as Chairman. He, therefore, moved that Mr. William Palmer, one of the trustees, should take the chair.—The motion was seconded and carried, and Mr. WILLIAM PALMER took the chair.

The CHAIRMAN said he was exceedingly sorry that he had been called upon to take the chair, as he had only been on the board 14 days or so—since the 7th of July; and, therefore, at present he was not acquainted with all the details of the mine. He had hoped that Sir John Jenkins, who had been their Chairman hitherto, would have been present, especially as that gentleman was one of the old directors. However, in his absence, it was perhaps better that he, as one of the trustees, should take the chair. The meeting, as the shareholders were aware, was simply to create a new fund. As far as he could gather they would have to find 18,000*l.* or 20,000*l.*. The old directors if they had put down the mill as originally intended, which would have cost about 8500*l.*, would have had plenty of money; but as it was now the mill would cost from 12,000*l.* to 13,000*l.*, and with the increased rate of freight and other things would involve a further large expenditure. He believed that the expenditure, although large, would bear its fruit, and probably when it was once paid for and put down it would produce them a very large amount of money. In fact, he hoped the company would pay 20 to 30 per cent. one day or another. The larger the mill which was put down and the expenditure now the sooner the mines would be developed. Whether it was prudent for the old directors to have expended so large an amount of money he would not give an opinion upon. All he could say was that at present they required 18,000*l.* or 20,000*l.*, and he hoped that amongst the debenture-holders the money would be quickly subscribed. As regarded further detail, he would refer them to Mr. Pulbrook, the late managing director, who would give the latest accounts which had come over, which he supposed were to be depended upon.

Mr. ANTHONY PULBROOK (late managing director) said that no doubt the debenture-holders would like to know the reason why the mill had run to a much larger amount than was originally anticipated. At the last meeting he read to them a letter showing that instructions were given to prepare a mill to cost 10,000*l.*. The engineers did not carry out these instructions. After having reported to the board that 10,000*l.* would be sufficient, the engineers insisted on having a much more expensive mill, and also reported that the company could not get along successfully without having that extended mill. The directors endeavoured from time to time to get them to state what the total cost of the new mill would be; but this estimate could never be obtained from them. Even in this country it was very difficult, as everyone must be aware, to get engineers and

builders to keep down to their estimates, and if it was difficult here it was much more difficult when the scene of operations was some 6000 miles away. He would explain where some of the principal divergences in the expenditure had arisen, and show how necessary it was that the mill should be ordered as soon as possible. At the previous meeting he explained how it was found necessary to roast the ore. They had Mr. Hofmann's report before them, and although Mr. Hofmann at first considered them free milling ores, yet he afterwards found it absolutely necessary to roast them, and Mr. Hofmann showed in his report that there was no chloride of silver present in the ores, and that they were not suitable for raw amalgamation. Consequently this necessitated an expensive roasting apparatus. The directors endeavoured to stop that expense by ordering two furnaces only; but they were told it was absolutely necessary to have three, and that these and the freight and carriage to the mine, &c., would come to 4000*l.* extra. They knew it was no use working a mill on 40 ore, and allow 15 to run away in the tailings, and only get out 325 at an expense of 27 or 28. What they had to arrive at, and what Mr. Hofmann advised them to do, was to get as much silver out of the ore as possible at the least possible expense. He himself found when he took his journey over there last year that the failure to erect complete and proper mills was the cause of the failure of nine-tenths of the companies. It was true some companies succeeded because they found very rich bunches of ore, and in that case it was not necessary to put down such expensive mills; but in this mine the ore existed in lodes, which carried small quantities of silver throughout, which must be transferred to the mill at a cheap expense, and as much silver got out of the ore as possible. It was no use having an incompetent man, and trusting to finding rich bodies of ore. The Ontario Company and the Lexington Company, which had erected proper mills, were now the most productive mines in the United States, and paid the largest dividends to the shareholders. At the time the original estimate was suggested it was thought there would be a sufficient water supply from the brook at the foot of the mill; but it dried up in the dry season, and it became necessary to bring water from the river 2½ miles away, which necessitated the laying of 2½ miles of pipes, which would cost 3000*l.* more; but, on the other hand, it saved working expenses, as the water flowed of its own gravity, and there was no expense of pumping all the year round. Another item of expense arose in this way. The ore used to be reduced by the process of lixiviation to sulphide of silver, which was 800 fine, and then it was exported to the United States to be treated. Within the last few months the Mexican Government had put a very heavy export duty on the exportation of sulphide of silver. There was no place in Mexico where the company could get it reduced to pure silver, and consequently it became necessary to have a silver-refining furnace erected, which was also an additional expense. Then, it was necessary to erect a sulphur-house and furnace; these were in the original estimate, but were struck out by the directors, and were only ordered within the past few months, when they received special information that the engineers could not get on without them. Then, again, Mr. Hofmann originally anticipated that the Madrona Mine would be the richest mine in the place, and the mine was within a short distance of the mill, and could be carried there by team. But it had been ascertained that the Madrona Mine was disordered by a slide, and until they got through that slide (which was a question of time) they could not expect to get any ore from the mine. But they had opened up some rich ore in Durano, and this was a mine which could be opened up very quickly. They had the ore there, but it was at the top of the hill, and they could not make a road to bring it down. They had the choice of two things; either to construct a wire tramway from the mill to the hill, or to purchase a lot of mules, and convey it on muleback. By mules it would have cost 220 per ton, whereas the engineer told him that by tramway it could be carried down for 8½ per ton, as the full buckets would take up the empty. This would not cost much less than 2000*l.*. Another extra expense arose in this way. It was given out and stated that mining machinery was erected free of duty in Mexico. It turned out that anything which could be used in mining alone was free from duty, but on other things which could also be used for other purposes the company had to pay a heavy Mexican duty of 11 cents per kilo, which would run away with another 1000*l.* or so. Therefore, it had become necessary to raise additional capital, but the money which would be raised would be laid out productively. In connection with the expenditure of money, in some cases the company's representatives out there had disobeyed orders. Instead of laying out the money entirely for the mill they had been building very pretty boarding houses for the men, whereas they ought to have waited till the company returned profits before they built the houses. But setting that aside he could not himself see that there had been money wasted in any shape or form. The money which had been expended had been laid out in such a manner as would, he thought, be productive afterwards of great benefit to the company. He went on to say that it was no use putting up a cheaper mill, and pointed out that in order to get out the largest percentage possible of silver it was necessary to have a mill of the description now proposed, and this was the opinion of the best scientific men. He thought that the scheme now proposed for raising the money was fair to all parties. It was proposed to create preference debentures on precisely the same terms as the other debentures, and to allot them amongst the existing debenture-holders. It was a proper and legitimate way of increasing the capital, and he believed the preference debenture-holders would get the whole of the money back within four or five months after the starting of the mill. He had pleasure in moving:—

"1. That this meeting of debenture-holders of the North Mexican Silver Mining Company (Limited), holding debentures in respect of the Seven per Cent. 80,000*l.* First Mortgage Loan of that company, do hereby resolve, by virtue of the 20th clause of the Deed of Trust, dated the 31st July, 1884:—

"(A.) That the company may raise a Seven per Cent. Preference Loan for 20,000*l.* for the purposes of benefiting or working the mines of the company, or erecting any increased or additional machinery thereon, or otherwise protecting or improving the rights or interests of the debenture-holders, which Preference Loan shall be represented by preference debentures of 20*l.* each, bearing 7 per cent. interest per annum, and which shall have priority over the said Seven per Cent. 80,000*l.* First Mortgage Loan, and shall constitute a first charge upon the undertaking of the company.

"(B.) That the trustees or trustee for the time being of the said Deed of Trust of the 31st July, 1884, are hereby authorised to do and execute all such acts and assurances as may be necessary to give to the holders of the said preference debentures a first charge upon the undertaking of the company in priority to the said Seven per Cent. 80,000*l.* First Mortgage Loan.

"(C.) That as consideration for the debenture-holders thus creating 20,000*l.* preference debentures, the North Mexican Silver Mining Company (Limited) be required to issue to the trustees for the debenture-holders, or to such other person or persons as the trustees may nominate, fully paid-up shares in the 200,000*l.* capital of the said company to the extent of 20,000*l.* to be transferred as a bonus to the preference debenture-holders making the advance.

"(D.) That every present debenture-holder in the company who has registered an address shall be entitled to a *pro rata* allotment of the said preference debentures so far as may be, and that every such allotment shall be, and be deemed to be, cancelled in every case in which the debenture-holder shall not, within one week from the date of posting the allotment letter to him, accept the said allotment by paying a deposit thereon of 2*l.* each preference debenture accepted by him, and signing an agreement to pay up the balance due from him on the said allotment as follows:—8*l.* each debenture within one month from the date hereof, and the balance of 10*l.* each debenture within two months from the date hereof, and the directors of the company be, and are hereby authorised to allot all preference debentures, the allotment whereof is not accepted as aforesaid, to such person or persons, and upon such terms and conditions as they may deem expedient, giving the preference on allotment, in the first instance, to all present debenture-holders who may elect to take an increased amount beyond their *pro rata* allotments."

Mr. ANDREWS seconded the resolution.

A SHAREHOLDER asked whether the machinery was in a state of completion.—Mr. PULBROOK said all except the sulphur-house and Hofmann's furnace. They had all the timber and materials on the spot.

Mr. LAFONE thought the management had shown themselves totally unable to carry on the business, either from ignorance of it, or they had not attended to their duties. The first thing to be done was to get rid of the old directors. He thought the money had been expended lavishly, with no result to the shareholders. He complained that the accounts had been loosely kept, and that properly audited accounts had not been furnished.

Some further discussion ensued on certain matters of detail, and Mr. PULBROOK replied to some questions which were put regarding thereto.

Judge BELL also expressed the opinion that there had been no satisfactory statement of accounts rendered, and that the balance-sheet was made up of items entered *ex post facto*, and not currently with the transactions. He did not think there had been any accounts made out from books kept correctly. As the vendor of this property he felt the question must have a lodgment in the minds of those who put their money in, as to whether or not a worthless property had been foisted upon them, or whether a good property had been mismanaged. The evidence was satisfactory that the property was good in itself, but the fact was that the company had entered into a scale of expenditure entirely beyond their means to provide for. It seemed that nearly 10,000*l.* had been paid to Chalmers and Fraser for machinery, and there remained due to them over 30,000*l.*, including the freight sent forward from Chicago down to Chihuahua. There had been expended 14,000*l.* in Mexico, and it would take 20,000*l.* more, because having entered on this scale of machinery they must go through with it. He had not been paid for the property except in part. These proposed debentures took preference of the purchase-money. He did not complain, for he had so much confidence in the property that he was sure they would get their money back if they perfected the mill and set it to work. He paid in cash over 20,000*l.* for this property, and had taken care of it for three years before he had put it into the hands of this company. If he had not entertained a high opinion of it he never would have bought it or taken his pay in the debentures. All that was wanted was good and economical management.

Colonel H. A. SANFORD (one of the old directors) defended the action of the late board. He believed the property was a sound one, and hoped the present board would carry it out successfully.

The resolution was then put and carried.
On the motion of the CHAIRMAN, seconded by Mr. ANDREWS, a resolution was then passed altering the clause in the Articles of Association relating to the remuneration of the directors.
The proceedings then terminated.

DEVON FRIENDSHIP MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices of the company, Austin Friars, on Thursday.

Mr. J. H. MURCHISON (the Chairman of the company) presiding.
Mr. J. H. A. SMITH (the secretary) read the notice convening the meeting, and the following report of the directors:—

1.—In presenting this report, your directors remind you that two general meetings were held last year, at which it was agreed that 20,523 shares in the capital of the company remaining unallotted should be issued at a discount of 10*s.* per share, the holders thereof to be entitled to one-half of the net profits available for dividend. About 8000 of these shares were agreed to be taken, provided the whole number were subscribed for. This condition not being fulfilled the matter, so far, fell through; but subsequently 860 were taken unconditionally, half of them by your directors.

2.—The old calciner being inefficient, and constantly requiring repairs, and thus repeatedly interfering with the returns, a new and a larger one was ordered, and has been delivered on the mine. When erected, your directors are assured that even from the ground opened at Bennett's shaft, returns could be made that would yield a good profit, when there would be little difficulty in obtaining the additional moderate amount of capital necessary for draining the old mine, where, from the authority of practical men, who speak from their personal knowledge, there are enormous quantities of arsenical mundic, besides tin and copper, which would be at once available for yielding very large profits. The shareholders have been repeatedly told this before, and all the information obtained since tends to fully confirm its correctness.

3.—It is estimated that about 300*l.* would be required to complete the erection of the new calciner, which could be done within two months. It will be seen by the accounts that the net general liabilities up to July 31 is 3357*l.*; but your directors have allowed to the fullest extent for all claims, and they believe that a deduction of about 700*l.* might be made if they were in a position to settle for the remainder, allowing a further sum for working and other expenses until returns could be realised. The total sum required to probably settle the present liabilities, erect the calciner, and carry on the works without returns for several months would be under 4000*l.*

4.—Your directors need not say anything more with regard to the merits of the property, and it is a pity that the company cannot reap the great advantages, which would no doubt accrue from the moderate outlay required to enable it to be properly worked. Your directors therefore intend to propose at this meeting the appointment of a committee of shareholders to consult and advise with your directors as the best course to adopt to raise the small sum required. Your directors are convinced that if the shareholders would make themselves better acquainted with the property there would be little difficulty in the matter, as the undertaking is one which partakes as little as possible of a speculative nature.

5.—Your directors have elected Major Robert Hearne to a seat at the board, in place of Mr. John McMillan disqualified.

6.—Mr. Samuel York, one of your directors, now retires by rotation, but being eligible offers himself for re-election, as does the auditor (Mr. Henry Catley Stewart).—J. H. MURCHISON, S. YORK.

The statement of accounts which had been circulated was taken as read.

The CHAIRMAN: Gentlemen, from the report you know very clearly, I think, the actual position of the company. I can only say that, so far as the value of the property is concerned, it is needless for me to occupy your time in stating what has so often been repeated to the shareholders on the subject. There are large shareholders here from the locality, who know the property better even than any of us, and I am quite sure they will confirm, at all events, that part of our proceedings: that the property itself is one not only of very great value, but that its value consists in this, that the peculiar circumstances of the case make it an undertaking not so much of a speculative character as this sort of property generally is. As you are aware, this great mine has been an extremely productive one for copper and tin, and the profits derived from those sources were very large, even when the mine was worked under very great disadvantages to what now exist. At that time a very large quantity of a certain mineral—arsenical mundic—was found in connection with the copper and tin lodes, and this mineral was then of no marketable value. Mundic of a class like this is now a very valuable commodity, and we have a very large quantity of it broken and ready to be raised, with a very small expense of returning it, as soon as the water is taken out of the old mine. In the meantime, with regard to this new calciner that is referred to in the report, I may say that the old one has been a very great hindrance, and a very great nuisance to us. We found the calciner there when we purchased the property. For a time it went on pretty well, but after a little while it was continually breaking down. We had to repair it from time to time, and the consequence was that we were unable to make regular returns, and in that way we fell back on our returns. As to the question of the moderate amount which is required to place us in a good, sound financial position, that has been fully explained in the directors' report. I may say that if the property was sold in these times I do not suppose it would, at all events, fetch more than the mortgages upon it. Probably it would not fetch so much, but

between selling a dead horse and a live one there is a very great difference. With a small amount of money we should have a going concern, free from debt, and the value of the property would, of course, be very considerably increased. The first mortgage was originally 1500*l.*, but we have paid off 750*l.* of that, so that there is a balance now of only 750*l.*; but taking the shareholders' mortgage, represented by debentures and interest at 6700*l.*, we may say that in round figures, the mortgages on the property amount to about 7000*l.* With regard to the appointment of a committee to consult and advise with the directors, we propose that certain shareholders should be elected to-day, and then that these gentlemen should enter into communication with some of the largest shareholders afterwards, whom we have not yet authority to put on the committee. If they were communicated with privately, most likely we should get their assistance. Some of the shareholders are very well off, and one of them particularly—a gentleman largely connected with the copper trade—knows the property well. There are several gentlemen who would put more money into the company, provided they see that a sufficient amount will be subscribed. They will not put in their money, they say, unless it is to be of real use. Two or three large shareholders have already agreed to assist, but we are also in negotiation with a firm who have great knowledge of the arsenic trade, and who have a very high opinion of this property. They are not interested in the company at present; but we have the best reasons for believing that they will join us provided that the shareholders or others provide the balance of amount that is required. It is for the shareholders' interest that we should work together, because as the thing stands now, looking at the mortgages upon it and so on, it is most essential that the amount required should be obtained, in order that we may bring the concern into the profitable state that we anticipate. Bennett's shaft, even without unwatering the old mine, would, it is said, yield a good profit; but it is most desirable that the old mine should be drained. The shaft there is down between 200 and 300 fms., and we are told by those who know the property well that there are hundreds of thousands, some say millions, of tons of this arsenical mundic which has been laid open in the course of working by the old company for about 60 years. What is of great importance is that we have ample water-power for all our purposes, so that we could put up the plant and unwater the old mine at a comparatively small cost. I may say that we have sold nearly 13,000*l.* worth of arsenic, copper, and tin from the limited portion that we have been working at Bennett's shaft. The Chairman then moved the reception and adoption of the report and accounts.

Mr. SAMUEL YORK, in seconding the motion, said he had the highest possible opinion of the property, and he had no doubt that its value would be fully confirmed by the local gentlemen who were present.

Mr. H. C. STEWART said it was lamentable to see so undoubtedly valuable a property in the state it now was in. All that was required was that a small amount of cash should be found to put the company in a good financial position. There was a very general opinion that with a little money the company would not only be self-supporting, but that it would pay the shareholders well for their outlay. But it would be absolutely impossible to go on unless the meeting should result in some decision by which the whole aspect of the undertaking would be altered. What had most to be feared was the apathy of the shareholders, for as to the value of the property there was no doubt.

Mr. JAMES PEARCE (of Tavistock) said he had known the property for a great many years, as he was a resident in the district, and the universal opinion in the neighbourhood was that it was the best mine for miles round, indeed it was looked upon as unequalled in Devon or Cornwall. (Hear, hear.) Copper was being replaced by tin just at the right time. If the old mine were unwatered, he believed that no mine in Devon or Cornwall would have equal chances to Devon Friendship.

Mr. MATTHEW LOAM (of Cornwall) remarked that the Chairman had certainly not overstated the value of the mine. Its resources for arsenic, indeed, could hardly be exaggerated. The arsenic produced by this company realised about double the price of copper ore, which was a very important consideration. The real difficulty which the company had had to contend with had been shortness of capital. (Hear, hear.) Bennett's part of the mine was no doubt very valuable; but what must be done was to drain the old mine to the 90 or 100 fm. level. If that were done, he had no doubt of the results. They must face the facts boldly, and endeavour to raise a sufficient sum to put the mine in a thoroughly sound state. (Hear, hear.)

Mr. SIMMONS: How long is it since the old mine ceased to be worked?

Mr. LOAM replied that Messrs. Taylor's sold it about 10 years ago. In reply to a further question, he said that the levels would, in all probability, be found in good order. The shaft had been sunk in hard, solid ground, and very little timber had been necessary.

The CHAIRMAN pointed out that plant could now be purchased very cheaply. He had been told by a gentleman largely interested in the arsenic trade, and knowing this property well, that if the mine was placed in a position to reap the certain resources which it contained it would be the largest arsenic works in the world, and that they would be able to command the price of arsenic in the market.

After some further conversation of a general character, the report and accounts were unanimously adopted.

The CHAIRMAN then proposed, "That a committee of shareholders be appointed to consult and advise with the directors as to the raising of the money now required, and that Messrs. F. H. Leak, James Pearce, H. C. Stewart, and the Rev. H. Worsley be members of said committee, with power for them, in conjunction with the directors, to add to the number."

Mr. DONNET seconded the proposition, which was also carried unanimously.

The CHAIRMAN said the company had sold from Bennett's part of the mine, working only in a very limited way, 1805 tons of arsenic, realising 9918*l.*; 49 tons of tin realising 2298*l.*, and 148 tons copper ore 711*l.* 13*s.* 8*d.*, or a total of 12,948*l.* He added that besides the arsenic and tin it was believed they would be able to return 100 tons of copper ore a month to begin with very soon from the old mine. The ore was very rich in quality.

Mr. URWICK asked whether the creditors of the company would take debentures or shares for their debts, so as to assist the shareholders?

The CHAIRMAN replied that that was a matter which the committee could very properly endeavour to arrange.

Mr. H. PEARCE proposed the re-election of Mr. S. York, the retiring director.—Mr. LEAK seconded the proposition, which was carried.

On the motion of Mr. WITHERS, seconded by Mr. JAMES PEARCE, Mr. H. C. Stewart was re-appointed auditor.

The meeting closed with a vote of thanks to the Chairman.

NORTH CORNWALL RAILWAY—PROBABLE EXTENSION WESTWARDS.

The ordinary general meeting of shareholders of the North Cornwall Railway was held at Launceston, on Thursday.

Mr. J. TREMAYNE, M.P., Chairman of the directors, presiding.

The CHAIRMAN, in moving the adoption of the report and statement of accounts, said it was not necessary for him to go at any length into explanations of that report. The railway not being ready for traffic there was very little to be reported upon, except the actual progress of the works. The directors thought it was right that this meeting should be held at Launceston, because there were now tangible visible evidences that the railroad was coming there rapidly. They had been exceedingly fortunate in having a dry time, and the result had been that the works had got on very rapidly, and he thought, so far as they were informed, the progress had been in every respect satisfactory. (Applause.) There had been some delay, as they knew, in the progress of the works in consequence of an attack of small-pox. That attack, which had been overcome, was imported, and was confined to the workmen on the line. They aware that the whole of the land which was re-

quired was now in the hands of the directors, or nearly all of it. There was only one claim at present unsettled. It was a matter of great gratification to him to be able to say that in most instances the terms of settlement for the land had been adopted with great ease and facility, and in a very liberal spirit on the part of the owners of the land. They wanted men possessed of land who recognised the fact that, although the making of a railway might be productive of temporary inconvenience, yet the ultimate construction of that railroad could only tend to one result—to an enormous increase in the value of land. Whatever might happen—whether there might be times of agricultural depression, or whether land might be less valuable in the market than it was—wherever a railroad was made the value of land was materially increased. He wanted to point that out particularly to the owners of land in the neighbourhood of Launceston, because they did not mean to stop in Launceston. (Applause.) Their object was to push the railroad westward as directly and quickly as they were able to do. (Applause.) The more support they got from owners of land the more rapidly would come the construction of the railway. They confidently hoped that by May next year the line to Launceston might be opened and in working order, and, in the absence of unforeseen circumstances, he did not see why it might not be before that date. (Applause.) They had obtained a Bill for the extension of the time for the construction of the next section, but it should not be understood or imagined that because a larger extension of time for the completion of the works was asked for they had the slightest idea of delay. Their object was to continue the railway as quickly as possible. If the country would help them they would go on. But they could not make bricks without straw, and they could not build railways without money. He believed that not only would the section now making be a remunerative investment, but, from what he could gather, the section from that place to Delabole would be equally a profitable investment. They had subjected the results of their enquiries to competent authorities, whose conclusion thereon was even more favourable than what they had ventured to lay before Parliament. They had a favourable agreement with the South-Western Company and every prospect of success, but he repeated that the question of time would be materially affected by the amount of support which the inhabitants of the locality were prepared to give the directors. (Applause.)

Questions having been invited,
The MAYOR of LAUNCESTON (Mr. G. Graham White, jun.) said he believed statistics which were returned showed that the traffic at Boleford would be double what it would be with a station at Tower-hill. He wished to ask why the directors had consented, in the face of those statistics, to place the station at Tower-hill, instead of at Boleford, especially with the fact that at one place they could get the land free, while at the other they had to pay for it.

The CHAIRMAN, in reply, said the question of the respective merits of Boleford and Tower-hill was brought upon several occasions under the notice of the directors. They had a variety of statistics, and amongst them those which were originally prepared for the Parliamentary Committee. They came to the conclusion that, looking solely to the welfare of the railway, Tower-hill was the more preferable position to choose than Boleford. There was a good deal of difference of opinion upon it at first, but when it came to the ultimate vote Tower-hill was selected without one single dissentient voice.

Mr. CHARLES GURNEY seconded the adoption of the report, which was carried unanimously, and the proceedings closed with a vote of thanks to the Chairman, proposed by Mr. HARVEY, and seconded by the MAYOR.

NEW CARADON MINE.

A meeting of shareholders was held, at the offices of the company, Gracechurch Buildings, Gracechurch-street, on Thursday.

Mr. J. Y. WATSON in the chair.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting.

The accounts were also read, showing a balance of assets over liabilities of 389*l.* 15*s.* 8*d.*

The report of the agent was as follows:—

August 12.—I beg to notice that since the last general meeting the work throughout this mine has been urged on with all possible dispatch. The engine-shaft has been sunk 7 fms. 5 ft., taking it down to make a 60 fm. level. We have also close timbered, cased, and divided the same, put in footway and ladder collar, lined the whim-shaft, fixed drawing-lift from the 50 to the 60, cut plat, and secured the same, driven the cross-cut south of the shaft 6 fms. 4 ft. at which point we intersected No. 1 lode, and have driven east on its course 5 fms., but the ground and lode throughout this drive have been more or less disordered by the influence of the cross-course, which in this part of the set is with splits from the same over 9 fathoms wide; but we are pleased to say that the lode in the present end appears to be getting into more settled ground, and presenting a more kindly appearance, and we are daily expecting to get an improvement. The ground about this lode west is hard, similar to what it was in the upper levels, and, as stated before, it did not improve until driven some 6 or 7 fathoms from the cross-course, when it opened out to a fair size, producing some good yellow copper ore. At this point we sunk a little in the bottom of the 50, and broke and drew to surface some of the ore, when it was decided to sink the shaft to the 60 to prove this and the other known lodes in the sett in that level. We have now about 5 fathoms to drive to the 60 west to get under the ore seen in the bottom of the 50, and in conclusion I may remark but little has been done to prove the various lodes in this extensive sett, most of which are deserving a special trial.—N. RICHARDS.

The CHAIRMAN said: Gentlemen, the account now presented shows a balance of assets over liabilities of 389*l.* 15*s.* 8*d.*, but they include sums due on forfeited shares, and other doubtful items, brought down from last meeting. The actual liabilities of the company amount to 197*l.*; and as there are 7530 shares, a call of 1*s.* per share will pay this, and leave a balance to develop the lode at the 60, which is being opened upon away from the influence of the cross-course, and has to be driven 5 fms. to get under the ore in the 50. Another meeting is to be called in three months.

A SHAREHOLDER: How long will it take to drive 5 fms.?

Mr. PARRY: Two or three months.

The CHAIRMAN said the largest shareholder had written asking the size of the water-wheel, and whether it would carry them down another 10 fms.

The CHAIRMAN said the water-wheel was 40 ft. diameter, and would take them down much deeper.

The CHAIRMAN moved the adoption of the accounts and the agent's report.—Major CRAGG seconded the motion.

Mr. PARRY, in reply to Mr. SIMMONS, said there was not much likelihood at present of getting the small amount due on forfeited shares, but no doubt the amount due for calls in arrear would be recovered.

The resolution for the adoption of the report and accounts was then put to the meeting and carried.

The CHAIRMAN moved that a call of a shilling per share be made payable on or before Friday, August 28.

Mr. SIMMONS seconded the motion, which was put and carried, and the proceedings terminated.

POLROSE mining machinery and materials—in the parish of Breage—are all to be sold by public auction on the 17th inst. through the Vice-Warden's Court.

LEAD ORES.					Purchasers.	
Date.	Mines.	Tons.	Price per ton.			
August 10—	Foxdale	50	£10 5 0		Panther Lead Co.	
—	ditto	50	10 5 0		Sheldons, Bunk, & Co.	
11—	Liburne	40	9 4 6		ditto	
—	East Darren	20	11 7 6		Walker, Parker, & Co.	
—	Ormythyth	15	7 7 0		Panther Lead Co.	
—	Central Foxdale	35	12 1 6		Walker, Parker, & Co.	

BLACK TIN.					Purchasers.	
Date.	Mines.	Tons.	Price per ton.			
August 10—	Phoenix United	12	£52 10 0		Tamar Company.	

Mining Notes.

The remarks addressed to the reporters at the recent account in St. Just United recall the attempts once made at several mines to stop the reporting of the proceedings altogether—a step which, in the present day, would be utterly fatal to public confidence. But these attempts were easily defeated. It was found that nothing was easier than to qualify a reporter as a shareholder, and the opposition dropped. Of course, there may often be matters to which it is injudicious to refer in the public press, in mining as in everything else, but we have never known the reporters blind to this fact or deaf to any civil request. It may be as well, however, to remind objectors that a reporting shareholder is rather a more difficult person to deal with.

By the death of Sir John Trelawny the county has lost a much respected landlord, and a once prominent politician, who took an active interest in all local affairs. He had, however, no direct connection with mining enterprise, though many here imagined the contrary. The once prosperous Wheal Trelawny was so named not after Sir John, but after the late Mr. Charles Trelawny, of Coldrenick, who represented an off-shoot of the old stock, and who was Trelawny only on the female side. Sir John is succeeded by his son, Sir William Trelawny.

An opportunity for bringing into prominence some of the mineral riches of Cornwall and Devon, which no doubt will be made the most of, will be afforded in connection with the Trades' Exhibition, which is to open at Plymouth in the first week of the ensuing month. The Society of Architects, of which Mr. H. R. Gough is President, will visit Plymouth on that occasion, and hold sundry conferences. One of these is intended to deal with the natural resources of the district in the way of marble, granite, slate, and clays generally. At this particular conference papers will be read dealing with these matters alike from a practical and a scientific point of view, and the discussions it is also hoped will prove specially interesting. In connection with the Exhibition and visit it is, moreover, intended to make excursions to the chief quarries and works in the vicinity. We have so much mineral wealth here in the West beyond mining, properly so called, and it is really by comparison so little developed outside the locality even yet, that every advantage should be taken of such an opportunity as is here afforded to make it better known. Probably more of the details next week.

The Anglo-American Brush Electric Light Corporation have supplied to the order of the Australasian Electric Light Power and Storage Company, Sydney, one of the largest electro motors, if not quite the largest, yet attempted, which, from the circumstances under which it is intended to work is of peculiar interest. The Phoenix Gold Mine, situated in the mountainous district of Wakitipu, New Zealand, has lately developed a marked increase in the richness of the stone, and the present crushing arrangements consisting of a battery driven by a small mountain stream close to the mouth of the mine, are found inadequate for the present output of stone. About 2 miles—as the crow flies—from the mine is the Shotover river, with a practically unlimited supply of power; but owing to the country being subjected to severe snow storms and landslides, the transmission of power by means of rope gearing and by the usual methods is impracticable. It has, therefore, been decided to employ electricity for the purpose of transmitting the power, and, with this view, electrical plant, consisting of two No. 8 Brush dynamo machines, coupled in parallel to give 20 amperes and about 1500 volts at their terminals are being erected. They are driven by high speed turbines at the Shotover river, and the current conducted by overhead leads to the mine, 2 miles distant, when it will drive the electro motor requiring 20 amperes and 1300 volts to develop 20-horse power. The motor has been tested at the works of the Anglo-American Brush Corporation, and has been found to be capable of working up to 26-horse power at an efficiency of 65 per cent., and at so low a speed that there is no difficulty in reducing it to that required for stamps. The plant is being erected by the Australasian Electric Light Company's local agents, Messrs. R. E. Fletcher and Co., Dunedin, New Zealand.

(Continued on Page 924.)

THE BALKIS COMPANY (LIMITED).

The following correspondence has been forwarded to the shareholders:—

13, Porchester Gardens, London, W., 10th August, 1885.
Gentlemen,—I am the vendor of 252,000 acres, known as the "Mears' Farms," the consideration for which I agreed to take in shares and debentures, with the exception of 30,000 in cash. You will, therefore, see the large interest I have in the company; and the following facts having come to my knowledge, which I consider the shareholders should be acquainted with, is the reason for my addressing you. I reside in the Transvaal, and, at the request of the board, I used my influence and assisted their representative in that country, to endeavour to obtain the transfer of the Graskop property. Whilst so doing, I discovered, to my surprise, that three contracts had been made instead of one direct to the company for the purchase of this property, and that the consideration had been increased from 95,000*l.* to 315,000*l.* as stated in the balance-sheet, which I then saw for the first time. These contracts having come to the knowledge of Mr. Holland, the original vendor for 95,000*l.*, has probably influenced him in his conduct of the business and negotiation entrusted to him by the company, and has no doubt retarded the transfer of the property to the company. I determined to come to England to enquire into these matters, and, if necessary, to bring them before the shareholders with a view of the parties being made to refund the difference between 95,000*l.* and 315,000*l.* On my arrival I saw the board who referred me to the solicitors of the company and after fruitless endeavours to obtain something satisfactory I informed the directors that I should lay the whole matter before the shareholders with a proposal that a committee of investigation should be appointed to enquire into the way the affairs of the company had been managed with a view of considering the best way of reconstructing the same in the interests of the shareholders. A few days afterwards Colonel McMurdo informed me that the directors had decided to call a general meeting of shareholders, but instead they convened an informal meeting, which was held on the 14th ult., of only those shareholders who held 1000 shares and upwards. At this meeting the following gentlemen were appointed as a committee—Lord R. Montagu, Mr. Hodges (formerly a partner of the firm of Messrs. Hume Webster, Hoare, and Co., the Mr. Hoare mixed up in the sale of the Graskop property), Mr. Marks, editor of the *Financial News*, in which Col. McMurdo has or had an interest, Mr. Walker, and Mr. Jefferies. Mr. Mockford was also elected, but in consequence of some of the members of the committee objecting to act with him, he retired. My name was also mentioned, but an objection being raised that I was a vendor, I was not elected, it being well known to those parties who objected that I was fully acquainted with the extraordinary operations of the board. For the meeting of the 24th ult. I had prepared and printed a statement for circulation among the shareholders; but I was asked by Col. McMurdo, on behalf of the board, and by members of the committee, not to circulate it, as it might prevent funds being obtained, the want of which would jeopardise the very existence of the company. I, therefore, withdrew it, on the distinct promise of the committee to thoroughly investigate the matters I had brought under their notice. As I now find, the committee are apparently disposed to burke the matter, and actually, in the circular of the 5th inst.

suggest to the shareholders a plan of settlement that will practically condone the matters of which I complain, I consider it my duty to place my knowledge of the way in which the affairs of the company have been conducted before the shareholders for their consideration. I wrote the following letters which contain the various matters of which I complain, but the only answer I have received is the letter from Mr. Power, the assistant secretary.

13, Porchester Gardens, Bayswater, W., July 30th, 1885.
To the Chairman and Members of the Balkis Company (Limited) Committee.

Gentlemen,—Permit me to place before you my view of the basis on which the new company should be formed. I submitted a similar plan to Colonel McMurdo, as director, who at first ridiculed the idea until I informed him that I should bring the subject of the necessity for reconstruction of the company before the shareholders. The directors then convened the meeting on the 14th inst., at which you were appointed, when Colonel McMurdo submitted my plan to the shareholders. His proposition only embraced part of my scheme. My proposal was that we should form a new company, with a different title, under entirely new management, the new company to issue 1*l.* shares, at the price of 18*s.* per share for every four (4) shares, to each of the shareholders in the Balkis company as may elect to avail themselves of this privilege; issuing debentures in the new company in exchange for the old, or exchanging the debentures for shares. The lands belonging to the company, including Esterling and Graskop, comprises about 270,000 acres, so that each share would be represented by about one acre of land.

As I stated in my plan to Col. McMurdo, and which was submitted to Mr. Gurney, the new company should undertake trust, loan, and agency business in the Transvaal, so as not to be entirely dependent on the mines for an income. I suggest that the title of the new company should be "The South African Land, Mining, and Trust Company," or something to that effect. A trust and agency company has been in existence in the Transvaal since 1878, which has paid dividends as high as 70 per cent., besides placing a large sum to reserve fund, of which I have evidence with me from gentlemen connected therewith that it is only from want of larger capital that their business has not been very largely increased, and that there is a good opportunity for us. As it is indisputable that the principal business of the company will be in the Transvaal, the company will have to have an office at Pretoria, which should be under the management of local directors, who being on the spot would watch the interest of the company, and be in a position to arrange with, or to prospect, cultivate, and improve the company's property, and to do the business before mentioned. I am of opinion that the present directors of the Balkis Company should confine their attention to the transferring of the properties and assets to the new company and the winding up of the present company; that no director of the Balkis Company should be a director of the new one, as the success of the new company mainly depends upon the management. I beg to state I can suggest the names of three gentlemen to act as directors who would from their position in the City and general knowledge of affairs inspire confidence in the company. Before taking over the assets and liabilities the directors should retain the right of instituting the minutest enquiries into the acts of the past directors and management of the Balkis Company, and to recover for any excessive charge or payment that may have been made, but in the meantime that should not stay progress. It was suggested to me that I should become a member of your committee, but as I am the originator of the plan for reconstruction, and also of the accusations brought forward by Mr. Wyman-Jeffries at the meeting on the 14th inst., I considered it best not to join. Trusting that you will read this in the same spirit that prompts me to write—the welfare of the new company. I shall, however, be happy to attend at any time I can be of service, and would place before you all information, documents, and letters respecting the agency in Pretoria to which I have alluded.—I remain, gentlemen, yours truly, J. E. MEARS.

13, Porchester Gardens, Bayswater, W., August 5th, 1885.
To the Chairman and Directors of the Balkis Company (Limited).

Gentlemen,—On the 27th of September, 1883, I entered into an agreement with the Balkis Company (Limited) under its common seal, to sell 42 farms to the company for the consideration of 50,400*l.*, to be paid partly in cash, debentures, and fully paid-up shares, which land or farms comprise 252,000 acres, at 4*s.* per acre. This agreement, I believe, should have been registered at Somerset House. Please inform me why it has been so long delayed. I also beg to call your attention to the fact that the purchase price, as above stated, was 50,400*l.*, and that I have only received cash 30,000*l.*, debentures, 5700*l.*, and 12,900*l.* in shares. I shall be glad if you will inform me when and to whom the balance was paid, and why the purchase price of the property is entered in the balance-sheet of the Balkis Company (Limited), dated June, 1884, at 63,000*l.* I would also call your attention to the fact that the agreement for the purchase by the company of the Graskop property appears not to be filed at Somerset House. I shall be glad to know when the audited balance-sheet now due, to the 30th of July last, will be issued to the shareholders.—Your early reply to the above will oblige, yours truly, J. E. MEARS.

13, Porchester Gardens, Bayswater, W., August 5th, 1885.
To Messrs. Pattison, Wigg, and Gurney,
11, Queen Victoria-street, E.C.

Dear Sirs,—As you are the solicitors to the Balkis Company (Limited), and prepared the agreement I made with that company for the purchase of my 42 farms, I beg to enclose you copy of a letter I have to-day addressed to the Chairman, and shall be glad if you will give the same your attention, and explain why the said agreement has not been registered, and if necessary take steps to rectify the omission.—I am, dear sirs, yours truly, J. E. MEARS.

The Balkis Company (Limited).
28 and 29, St. Swin's-lane, London, 7th August, 1885.

To J. E. Mears, Esq., 13, Porchester Gardens, Bayswater, W.
Dear Sir,—I am desired to inform you that your letter of the 5th inst., has been handed to the company's solicitors (Messrs. Pattison, Wigg, Gurney, and King), to whom we refer you.
Yours truly, F. POWER, Acting Secretary.

13, Porchester Gardens, Bayswater, W., August 5th, 1885.
To the Right Hon. Lord Robert Montagu, Chairman of the Committee of Investigation of the Balkis Company (Limited).

My Lord,—I beg to enclose you copy of a letter I have this day addressed to the Chairman of the Balkis Company, in order that your committee may investigate the same, and favour me with the result of their enquiries respecting the points I have therein raised. I shall also be glad to be informed if it is a fact that the Balkis Company purchased the farm called Esterling from Mr. C. F. Kemp for 15,000*l.*; but in consequence of Colonel McMurdo setting up a claim with respect to other lands the board were induced to pay him a large amount, and included in it the agreement with Mr. Kemp, thus augmenting the purchase money from 15,000*l.* to the astonishing amount of 150,000*l.*, and subjecting the company to a payment of 4 per cent. Government dues to the Transvaal Government on that amount. I shall also be glad to be informed if you are investigating the statements made by me to Mr. Wyman-Jeffries and yourself—that the late Chairman, Mr. Mockford, and the directors negotiated with Mr. Holland for a purchase by the Balkis Company of the Graskop property for the sum of 95,000*l.*, with liberty to the company to issue 40,000*l.* in debenture bonds over and above the 95,000*l.*, but which formed no part of the purchase money, but to be issued for the benefit of the company. It was further arranged by Mr. Mockford, as Chairman, with Mr. Holland that Captain Hoare should be the nominal purchaser on behalf of the company, instead of which he (Captain Hoare) entered into an agreement to sell the said property to Colonel McMurdo for the sum of 215,000*l.*, and that Colonel McMurdo then entered into a contract to resell the same property, through Mr. Mockford, the Chairman of the company, for 315,000*l.*, as set out in the balance-sheet of June, 1884, the latter agreement with the Colonel not being registered at Somerset House, and in consequence the holders of the paid-up shares thereunder may become

liable to pay the full amount of the shares. I would also be glad to know what consideration the Balkis Company received from the South African Syndicate for the purchase of their shares for 732,800*l.* other than a subscription for shares in the Balkis Company for about 21,000*l.* I was always given to understand that the South African Syndicate would transfer to the Balkis Company a large area of land including the Swazi land concession; but even that, I believe, has not been the case. I should also be glad to know if the committee are taking steps to have prepared a duly audited balance-sheet made up to the 31st of June inst., for the information of the shareholders, and when the annual general meeting, now due, will be convened. I addressed a letter to you on the 30th ultimo, but as yet I have not received an acknowledgment. I must now beg an immediate reply.—I am, yours truly, J. E. MEARS.

I have received the circular of the 5th inst., signed by Colonel Malleon and Lord Robert Montagu, and the notice convening the extraordinary general meeting to be held on the 14th inst. With respect to the first resolution therein proposed, that the company be wound up voluntarily, and the appointment of two liquidators, I beg to point out that if such a resolution be passed it will be contrary to the arrangement made with the Court of Chancery, by which the petition for compulsory liquidation was adjourned. As will be seen from the following extract of the reported hearing of the case, "That if resolutions were passed for the voluntary winding up of the company, or if another petition was presented, this petition was to be restored to the paper." If, however, the proposed resolution be passed at the extraordinary general meeting, the petition referred to will be immediately entered for hearing, and should the resolution be overruled by the Court, and an order be made for the compulsory winding-up of the company, then the irregularities, to use no harsher term, that have been committed by the directors, who were vendors as well, would be thoroughly investigated by an officer of the Court. In the event of the meeting passing the resolutions as proposed, I would suggest that one of the liquidators should be a chartered accountant of good standing and reputation, and the other an independent shareholder, unconnected with the board or the committee, so that the restitution hinted at by the committee in their report may take place. The words of the committee were:—"Several contracts were made, which, as we think, were adverse to your interests, contracts which, after we have overcome our present embarrassments, will certainly call for minute investigation. Such investigation may lead to important modifications of these contracts, which may conduce materially to your benefit." Yet in the proposed Agreement with the new company, to be submitted to, and sanctioned by the meeting to be held on the 14th inst., it is stipulated that 30,000 shares at par shall be issued, to cancel the first and only mortgage on the Esterling Farm, which, as I have pointed out in my letter to the committee, was purchased from Mr. C. F. Kemp for 15,000*l.*, before Colonel McMurdo, a director, stepped in and added on the enormous sum of 148,500*l.* for compensation to him for the loss of a profit that he might have made out of another transaction with the company. This jugglery is set out in the Agreement filed at Somerset House, and can be inspected by any person.

As to the 80,000 shares that are to be given to cancel the 80,000 second mortgage bonds on the Graskop Farm, I beg to remind the shareholders that the committee stated in their report:—"You are not in full possession of the Graskop Farm, and diggers hold adversely the best part of it;" and yet the directors have paid the full purchase-money to the vendor, their colleague, Colonel McMurdo, including mortgage bonds, without the property being legally transferred to the company; and you are now asked to do the same thing by issuing 80,000 shares for a property that cannot at present be transferred to you, and which property, as I have stated in my letter to the committee, was originally bought on behalf of the company for 95,000*l.* from Mr. Holland, who sold it, as he supposed, to a nominee of the company, Captain Hoare, who sold it to Colonel McMurdo, who sold it to the company for 315,000*l.*, all three agreements being dated the same day, November 15, 1883. I cannot too strongly urge the shareholders to pause before sanctioning the proposed agreement, and the registration of the Memorandum of Association of the new company. Before the Articles of Association are sanctioned, the directors should be appointed by the shareholders, and should be men of known integrity and business capacity, unconnected with the board and the committee. Upon this important point the election of the directors of the new company, both the Chairman of the company and of the committee are silent. Another most important point is that before the company is wound-up an audited balance-sheet should be presented to the shareholders, so that the members may see in what way the funds have been dealt with.

In the circular of the 4th inst., it is stated:—"The news received from Graskop by the mail of Saturday last, the 1st inst., is of the most encouraging nature. Gradually that farm is being brought into a paying condition." From whom was this news received? as Mr. Horn, the secretary, lately informed the board from Pretoria, after a personal inspection of the land, that the Graskop property was not worth further outlay. In this opinion of Mr. Horn I do not coincide, as I believe, if properly developed and managed, it will prove a very valuable property. I regard this news with some suspicion, because on the day of the meeting on the 24th ult. there appeared in the *Financial News* an announcement by the secretary of the company that a gold discovery had been made on Mears' Farms. On my applying to the secretary for his authority for making such a statement, he replied he knew nothing about it. I then applied to Mr. Marks, the Editor, for an explanation, who informed me he had received the information from Colonel McMurdo. I am of opinion that either of the committee should be strengthened by additional names of independent shareholders, or a new committee appointed, and that in the meantime the reconstruction of the company should remain temporarily in abeyance. I therefore propose to move the following amendment to the resolutions set out in the notice convening the extraordinary general meeting to be held on the 14th inst.:—

"That the present committee be dissolved, and that five or more independent shareholders, unconnected with the directors, be appointed, with power to examine the late Chairman, Mr. Mockford, the directors and officers of the company, the minute and account books, as well as all documents and papers, to enquire into the truth or otherwise of the allegations made by Mr. J. E. Mears, to prepare a balance-sheet to date, and to obtain such professional assistance as they may consider necessary. That so soon as the committee are in a position to make a report, a meeting of the shareholders to be convened to consider the same, such report and balance-sheet to be printed and sent to each shareholder, with the notice calling the meeting." When the shareholders are in possession of this information they will then be in a position to understand the affairs of the company, and to determine what had best be done in their own interests. I am willing to heartily co-operate in the reconstruction, provided the new company is not overweighed by the enormous amount of capital in shares and debentures issued to intermediaries without valuable consideration.—I remain, yours obediently, J. E. MEARS, of Sunny Pretoria, Transvaal.

As we state on another page, our reporter was refused admission to yesterday's meeting.

GOLD AND SILVER.—Messrs. FIXLEY and ABELL write under date August 13:—Gold: The Bank has received since our last 73,000*l.* in sovereigns, from the East, while 105,000*l.* has been withdrawn from Lisbon and the River Plate. The Orion brought 73,000*l.* from the River Plate; Moselle brought 7000*l.* from West Indies; Cuzco brought 75,000*l.* from Australia; Clyde takes 42,500*l.* to Bombay.—Silver: With lower exchanges from India released at the beginning of the week to 49*½*d., at which price the arrival per Galicia was fixed, and subsequently fell away to 49*¼*d., which price we give as the quotation for today. The Galicia brought 48,000*l.* from Chili; Britannia brought 65,000*l.* from New York. The Clyde takes 165,000*l.* to Bombay.—Mexican Dollars: The only arrivals during the week have been 9030*l.* from New York, and 3500*l.* from the West Indies. The market was steady till yesterday at our previous quotation of 49*½*d. per oz., and with the arrival of the Ville de Bordeaux with about 142,000*l.*, announced at St. Nazaire, there will be an opportunity of testing the market within the next few days. The Clyde takes 14,000*l.* to China and the Straits.—Exchange: The following Indian Council Bills were allotted yesterday:—Bills on Calcutta, Rs. 5,30,000, average rate is 6*½*2d.; bills on Bombay, Rs. 10,000, average rate is 6*½*4d.

BRITISH MINES.

er in the east side, I put the mesh to cross-cut in this direction, and am pleased to say we have met with some splendid stones of solid lead ore, which surpass anything I have yet seen in the mine for quality. I am well pleased with its appearance, which promises to improve when we get into thicker beds above. Meeting with ore in this direction cannot fail to add considerably to the

blows:—In the eastern part of the mine an old adit has been taken up from the valley and driven some distance west on the Baldufode. This level is being cleared out, but not sufficiently as yet to get into the end. An old stull

WHEEL CREBOR.—Henry Phillips, P. D. Holman, August 11: Good progress.

awards is given on another page.

Member of the Redruth Mining Exchange.

GOLD IN BORNEO.—From a report of Mr. H. Walker, Commissioner of Lands of British North Borneo, it appears that gold exists in considerable quantities in that territory. Some natives had brought a little to Sandakan, and Mr. Walker set out to verify its existence in the Sagama district. He searched 30 or 40 different places, and found gold at almost every place, generally in small distinct specks, large enough to be gathered with the fingers, sometimes larger, and always in conjunction with a black metallic dust and iron or copper pyrites. The rocks met with were granite, gneiss, quartz, limestone, jasper, porphyrites, red sandstone. Steps will probably be taken to have the whole region thoroughly examined by a competent geologist. The minerals already ascertained to exist in North Borneo are gold, silver, copper, chromium, tin, plumbago, lead, and coal. Antimony and cinnabar are reported. On the west coast chromium, copper, and arsenic have been found; in the neighbourhood of Kina-balu, silver ore and pyrites; a sample of native copper has been sent to London; a rich sample of galena and silver, yielding on assay 115 ozs. of silver to the ton, has been found. Hitherto the officials of the company and the other Europeans on the Coast have been dependent for local information respecting these and other minerals on the rough statements of natives. It appears certain, however, that, besides its great forest and agricultural wealth, British North Borneo is also rich in minerals—how rich cannot be said until a thorough examination has been made.

course to pursue. The manager suggested the boiler should be worked only one day a week, which the defendant calculated would be sufficient to pump the mine. The defendant agreed to the erection of the boiler with an arch of brickwork to enclose the engine, all the coal on the floor and upper part of the mine being taken out, the intervening space between the coal and brickwork being filled up with sand or some non-combustible material. The boiler, however, was put up, but on going down the mine on April 26 he found the engine had not been bricked. The manager said this was because the water had got so high in the levels that he could not get the foundations down, and he thought it best to put up the engine and pump down the water, and then make a good job of it. The defendant then warned him that in the meantime they might have the place on fire, with which opinion the manager did not agree. He also found the coal had not been taken out. On examining the entrance of the return air-course, he found a great deal of smoke escaping; but the lower part of the course perfectly clear. He was told by the manager that the course had been examined. He felt no heat of any consequence in the lodes of the coal, and saw no signs of fire issuing from the engine or boiler. He found the water was low enough, in his opinion, to allow the foundations to be put in, and advised stopping the boiler and beginning the work. He was not told on the 26th of April that the coal had been on fire from the 14th of April, or he would not have left the pit till it was out, which could have been done at any time before it began to extend up the return air-course. In cross-examination, he admitted that he had the right of making an order, but could not enforce it; also, that in his letter to the manager he said nothing about brickwork being put in; but that, he said, was because he had already given verbal instructions on the point. It was true that in the reports on the work being done no mention was made of brickwork, and he did not know why, in replying on them, he said nothing as to the omission. He denied that he found the coal was very hot, though it was warm. He thought there was not danger of spontaneous combustion by letting hot smoke and exhaust air into the return air-course, but there would be from sparks. These, however, would not fly more than 10 yards higher than the funnel. On behalf of the defendant, Mr. GREENWELL, gentleman of 47 years' experience as a mining engineer, said he thought it safe to place the boiler where it was, with the precautions advised by the defendant, unless there were something

This week our markets have been rather quiet, and on the whole fairly steady. There is little or no disposition to transact business beyond the most necessary requirements, and all orders can only be secured by the acceptance of very low prices. At

the present time, when the Royal Commission to enquire into the existing depression of trade is being so prominently brought before the notice of the public, it will be interesting and not out of place if we here briefly consider the cause of the depression of metals, and at the outset we cannot do otherwise than insist upon the pressing need of our legislators taking up this question without delay. The state of trade now is so deplorable that it becomes most essential that immediate steps should be taken to realise the full extent of the depression, and having realised it to seek and apply the remedy. It is not a time, nor a matter for party differences, for the whole country is suffering, and cries aloud for trade restoration. The poor seek for labour, and there is little or nothing to be had, the manufacturer and supplier have to cut down their expenditure, and in many instances sell in more limited quantities, at little or no profit, whilst middle men are being hustled out of the market at a most alarming rate, and if such a state of affairs is serious in itself, the results is far more so, for what profits cannot be secured by the regular and ordinary way of transacting *bona fide* business is now sought for in speculation, and the trade of the country is thereby disorganised. A little investment, or even speculation, in commerce, is harmless enough, but when we find many operators making that the sole way of doing business, entering into the most extensive transaction of a speculative character and losing all their previous connections, simply because the method of doing business has so completely changed, then it is plain that something should be done to give immediate relief to the commercial classes. But more particularly we have to deal with the depression in metals. That it exists nobody denies, for it is proved by many indisputable facts, amongst the foremost of which may be reckoned the undisturbed quietude which reigns over the whole of the iron and manufacturing centres, the cheapness of prices, the unsatisfactory Board of Trade Returns, and the general complaints which are so freely expressed. But still, judging from the markets, it would appear that the depression is one more of prices than of demand. True it is that business is slack, the enquiry limited, and the feeling inanimate; nevertheless, in some instances deliveries have increased, a fact which might at first sight discountenance the complaints of trade depression, and make them appear worthless and unfounded. However, that such is a most erroneous conclusion is gathered from the fact that bad prices are the strongest indication of bad trade. In all instances deliveries have not increased of late years. There is in some cases a positive and enormous falling off. In iron, for example, there is a marked diminution in shipments as well as a great falling off in home consumption. Partly this arises from the substitution of steel for iron by so many consumers, and partly by the ever-increasing competition of Continental and other foreign iron competitors. To do away with this severe and keen competition is one of the most pressing and needful remedies, for whilst it exists our manufacturing are standing either entirely idle or in a semi-stagnant condition, and whilst numerous of the labouring classes in the iron trade are altogether without work, others are only partially employed. It is not our intention on this occasion to suggest the remedies, but merely to lay the facts of the case before the public. But as we have already said, the depression is chiefly of prices. In all metals, or with only one exception, there is an excessive depreciation of values, and, what is more momentous still, the tendency seems to be towards still further reduced rates. There is apparently no minimum to the market, no bottom to prices. The lower prices descend the more alarmed do holders become, and sales are ever being pressed, and the tone made most unhealthy. What is the cause of this general fall in prices? The answer may seem strange and conflicting; but it is nevertheless the truth, and may be verified by anyone who has studied the course of the metal trade during the past few years. It is the low prices themselves. Prices had previously descended to such a low level that suppliers could not go on selling without a loss. The profits realised were so small that they did not compensate sufficiently for the expenditure incurred, nor give any fair return for the money invested in the mines. The only way to increase profits was to augment the supply, so that in selling larger quantities more profits might be secured. This policy was speedily adopted, and has continued up to the present day, and in some cases seem likely to continue for some time longer. There could be only one result upon prices, and that was the depression which now exists, and which is unparalleled in the whole history of the trade. There is depreciation everywhere, tin excepted. There is a general tendency to cut down and minimise expenditure, and the low prices resulting from this way of doing business, though leaving some small profit to the supplier, reduces the profits of all others connected with the trade to a mere minimum. Thus manufacturers complain because whilst being able to obtain their raw material at a reduced value, the prices realised for their manufactured goods is so very much smaller that they are in no way compensated. The middle men, who work on commissions, if they are not entirely shut out of the market, necessarily have to do very much more business before previous profits can be secured, as reduced prices mean lower commissions, and even the consumers and shippers themselves are not satisfied, and often are complaints made by buyers that had they delayed their orders but a day longer they would be able to secure their requirements upon far more favourable terms. Such is the present state of trade, and if any relief can be afforded by Royal Commission or by any other means, it is most desirable that such means should receive every support, especially from the commercial classes.

COPPER.

This market has been rather quiet notwithstanding a fair number of transactions have been carried through principally, however, for the fall. We are now at the lowest point of the market on record, but this does not in any way stimulate the enquiry, and it seems very doubtful whether the market will be sustained even at the present low figure. Sellers are so very numerous, and are evidently anxious to rid themselves of their stocks. Prices being at the lowest points on record form no encouragement, as supplies come forward more freely than they did when the prices ruled at higher figures, and when there are many evidences of diminished regular trade. We want a change

in the rate of supply before there can be any change from the general downward tendency of prices. What figure will check the supplies it is impossible at present to predict. At current rates there is not the slightest prospect of curtailment; but, on the contrary, there is every probability of increase. Suppliers cannot sell in small quantities at present prices, so as to give themselves any profit, and therefore in their own interests they are forced to pour heavy quantities upon the market to make up the deficiency in profits by increased sales. In this way they have succeeded in making many of the mines pay a fair dividend to their shareholders, and it is not unlikely that in continuing to carry out the only policy which could have answered well during the last year or so supplies will, as prices further recede, proportionately increase their output. Of course, some figure must necessitate a reversal of this course of action, but the question is, are we near that figure yet awhile? It is plain that supplies are coming forward now in too heavy quantities, and it is equally certain that suppliers have no intention of curtailment in the near future, unless, indeed, holders should lose all confidence and let prices drop speedily to a much lower rate; but it is more likely prices will fall gradually rather than rapidly, and as the supplies come forward in their abundance so may prices be expected to crumble away. A few reliable estimates show that a reduction of 5% or even 10% per ton would not be surprising. Perhaps not immediately nor in the near future, but yet at no far distant date. A year ago, when prices were then at their lowest figure on record (some 10% per ton above what they are now) it was predicted that prices would recede to their present level, predictions which then met with general ridicule. But events have proved the accuracy of that view. It was said that that low price must check supplies instead of which it has caused an increase. Again, it was urged the low rate must stimulate consumption, instead of which deliveries have positively diminished. We speak not of any one month's returns, but for the past year ending 31st ult., and the latest figures strongly bear out the proof of what has been urged. Surely the views of those who have been so accurate in their opinions in the past are still worthy of the fullest consideration, and more particularly since the cost of supply is now made so extremely economical. The cost of transit is cheap, and there are so many facilities for bringing the copper speedily from the sources of supply and pouring it upon the market that stocks here are repeatedly swelling by very heavy quantities.

IRON.

A small business only has continued to be transacted in this metal, and prices are very steady, but their cheapness fails to stimulate any special enquiry. The immediate prospect of the trade is by no means cheerful. Whether in the distant future any fresh outlet for the consumption of iron may present itself has yet to be seen, but, certainly, at the moment, there is nothing sufficiently tangible to indicate the slightest increase in the forthcoming demand. Precedent shows that after periods of depression in this trade, business has revived from an extra American demand, and consequently the American trade is watched with some little interest. It is the forecast of what may take place here, the indication of the immediate future. Particularly accurate has it been during the past few months, so that a fair amount of reliance may be placed upon the daily advices received from that country, and a little insight into the immediate future may be gathered. The first point which is striking in the American advices is that they are invariably unanimous in pronouncing the trade dull. Dull because there is an absence of regular demand and an absence of speculative enquiry. Dull because prices show little or no variation from day to day, and because the market is greatly neglected. That one word represents the full state of the market as it is now, and it holds out no cheerful prospect for the future. From the dull, gloomy appearance of the market no ray of encouragement can be seen, and there is nothing to break the general monotony, and the prices which are quoted every day being identically the same is the strongest indication of the limited amount of business that is doing. Such is what may be gathered from the advice from America, the great iron-consuming country. Our manufacturers not only look to a large export business to America, but also to favourable influences arising therefrom, but both are now absent, and the state of the American trade is a most accurate picture of the state of the trade here, where works are closed and where others are working short time. Business is done entirely from hand to mouth, orders being executed only in fulfilment of the most pressing and urgent requirements, the market here, as in America, being decidedly dull. Again, as in America, so here, prices are unquestionably steady, and are likely to continue so, because values are now so low that to depreciate materially would be almost impossible, and, on the other hand, trade is not nearly good enough to justify any advance, a fact which is fully evidenced from the various returns from the several iron centres of industry. The Glasgow Warrant Market opened on Monday with a dull tone, and business was transacted between 41s. 4½d. and 41s. 3½d., and on Tuesday there was a fair business doing at 41s. 3d. to 41s. 4d. On Wednesday the market was quiet at 41s. 3½d., and yesterday the tone was a little easier at 41s. 2½d., whilst the closing figure to-day is 41s. 2½d. The shipments last week were 7031 tons, against 9727 tons for the corresponding week of last year, being a decrease of 2696 tons, and which makes the total shipments for the whole of this year 273,952 tons, against 344,425 tons for the same time of last year, and 395,257 tons for the similar period of 1883. There is one extra furnace in blast, the present total being 93, and the public stock has been further increased by 2547 tons, and now amounts to 614,014 tons against 611,467 tons last week. The imports of Middlesbrough pig-iron into Grangemouth last week were 6510 tons, against 4250 tons for the same week of last year, being an increase of 2260 tons, and which makes a total increase for the whole of this year compared with last of 70,128 tons. The Middlesbrough market continues very inanimate, the amount of business doing being extremely small, and there is no prospect of improvement. The shipments, however, this month have been a little better, amounting to 25,694 tons, or an increase of 3500 tons compared with the same time of last year. The public stock has been increased by 2185 tons, and is now estimated at 62,891 tons. Second-hand lots of No. 3 are offering at 31s. 10½d., and of No. 4 at 31s., warrants being nominally quoted at 32s. 9d. There is still a dull demand for manufactured, and the price for bars and ship-plates is 42. 15s., angles 42. 10s., and girder-plates 52. per ton. The Wolverhampton market is quiet, best bars offering at 72. 10s., and common at 52. 10s. Sheets can be bought as low as 62. 15s. for doubles, and hoops at 62., with an easy tendency. Pigs are quiet at 53s., for Barrow hematites 40s. 6d., for Wellingborough, and about 39s. for Derbyshire. There is only a limited business doing at Birmingham, but prices are fairly firm, or rather the downward tendency has received some check from the reduced production. A fair enquiry exists for common bars at 52. 5s. to 52. 10s. per ton.

TIN.

This market has been rather dull, and up to yesterday business was done at repeatedly lower rates. Various transactions were carried through as low as 90% per ton for sharp cash, but yesterday there was a slight recovery of about 2s. 6d., owing to more favourable prices being recorded from America; whilst to-day,

after opening at 90%, the price has stiffened up to 90% 5s. It is evident the market is now being regulated more from regular influences than from any one special feature, as has been the case during the past few months. Speculation is rather dormant, and consequently prices are sustained by the actual merits of the market. Nevertheless we are not entirely free from the influence of America, and as the market in that country is moved, so our market here is strengthened or depressed, and this is not unnatural, nor perhaps more than could be expected. It is true that stocks in America have increased, but they are still small. They are larger than they were, but still limited, and if there should be any extra American buying the light stocks there would be further lightened, and a speculative mania for buying would speedily follow. We see then what a little is required to push up prices. The stock here is so easily managed that it forms not the slightest drag to the market. The trade is now somewhat depressed, not from any special cause, but merely from the influence of the depression of trade generally. Last month the deficiency in consumption was made up by increased shipments, but is this likely to continue? America's wants have been partially satisfied. There is no longer the pressure to buy at any figure, and this makes many holders nervous and anxious to rid themselves of their stocks. Hence prices are at times easy, and the tone less healthy than it was, or, perhaps, it would be more correct to say less strong, because it may be questionable whether the tone does not really become healthier by the thinning out of weak holders. Business for forward prompts, however, is still very limited. It has for a long time been the principal adverse feature in the market. There has always been a certain lack of confidence about transacting business except for near prompts; but as the market continued fairly well sustained buyers for distant dates advanced their limits, and came much nearer the cash prices. There is still a premium paid for cash over forward, but with the lower prices for cash, and the proportionally dearer values for forward, it seems that, perhaps, the market may right itself in this way. It has long been a matter of speculation whether prices for forward would advance, or those for cash recede. It is evident that prices for forward cannot remain for any length of time so much below those for cash, the surprise is that it has continued already for so long a period. However, if this pause in the upward movement, and the reaction which has been made in prices restores the market to its normal condition, and re-establishes the general difference paid for forward over and above that for cash, it may be better for the market on the whole, and there will possibly be less reluctance on the part of a few consumers about effecting purchases.

STEEL.—There is a very fair business doing in some descriptions, but rails remain quiet, and prices on the whole show but little variation.

TIN-PLATES.—The market is dull, and a few second-hand parcels are offering at somewhat under makers' prices, but quotations generally are fairly steady.

SPELTER is firm, but there is not much demand, and ordinaries are quoted at 137. 15s. to 137. 17s. 6d., and specials at 147. per ton.

LEAD is quiet, and there are sellers of Spanish at 117. 16s. 3d., and of English at 127. to 127. 5s. per ton.

ANTIMONY remains unchanged.

QUICKSILVER.—The July statistics are as follows:—

	1883.	1884.	1885.
Imports—July	Bottles 18,226	3,602	5,381
Seven months	52,354	54,543	49,016
Exports—July	3,718	5,646	3,122
Seven months	29,923	32,593	24,579

The imports show a material decline, whilst the exports for July were small, but will be very large in August. With renewed activity in the demand the importers raised their price on Tuesday to 57. 17s. 6d., at which the market is firm.

The MINING SHARE MARKET is affected just now by the fall in metals, particularly in tin, and by the absence of dealers and the settlement of the usual fortnightly account, which commenced on Tuesday and ended on Thursday. There is not therefore much fresh business to record and prices, generally speaking, are weaker. The mines dealt in have been South Frances at an advance, East Blue Hills, Van, West Kitty, Prince of Wales, New Kitty, Leadhills, Wheel Crebor, Metal and Flow, and others.

TIN has fallen to 90 after having reached 97. This has naturally affected prices in the share market, and there is neither so much doing as there was, and quotations are mostly lower. On Monday last the smelters reduced the standards 2% per ton, and the probability is, they will put it down another 2% next Monday.

Blue Hills are quoted 1 to 1½; Carn Breas are lower, 3½ to 3¾. Cook's Kitchen, 9½ to 10½; the mine is improving, and the tin sales are increasing. Dolcoaths have declined to 71. 73. East Blue Hills advanced on Friday to 1½. 2. The mine has been inspected by Captain Josiah Thomas, of Dolcoath, and his report, which will be sent to every shareholder, fully confirms the reports of the agents as to the value of the late discovery in the 20, and advises the erection of 48 heads more stamps. The lode has been driven upon at the 20 fathoms level 18 fathoms, the whole of it worth over 20% per cubic fathom; and the shaft, which can be sunk 3 fathoms in a month, is equally favourable. Killifreth, ½ to ¾; New Kitty, ¾ to 1; South Condurrow, 7 to 7½; South Crofty, 3½ to 4; Tincroft, 6½ to 7; Trevaunance, 2½ to 2¾. Wheal Peavor, ½ to ¾; the flat-rods have been put to work in Peavor Bottoms lode, and the working and clearing the shaft is progressing satisfactorily. West Basset, 2 to 2½; West Frances, 7½ to 7¾; Wheal Basset, 6½ to 7; Wheal Grenville, 10½ to 11½; Wheal Metal and Flow, ½ to 1½. Prince Royal, ½ to ¾; at the meeting to settle the Share List it appears that 10,000 shares had been offered *pro rata* to shareholders in East Blue Hills at par, and that 2020 had been taken; and according to the original arrangement Mr. Pike applied for himself and nominees for the 1980 unissued shares at par, and it was unanimously resolved that 1000 be allotted to him, and the balance of 980 be held in reserve till the first general meeting. The shares, therefore, actually issued now amount to 11,120 out of 12,000. South Frances have advanced to 9½. 10½; at the meeting a dividend is looked for, and the mine altogether is looking well. The shaft is now down to the 246, and driving commenced on a lode worth 12% per fm. A winze sinking below the 236 is worth 70% per fm. for 12 ft. long. A winze below the 226 is worth 50% per fathom, and 70 tons of tin have been returned in the last seven weeks. Par Tin, 1 to 1½; Good evere, 1 to 1½; Phoenix, 1½ to 1¾; Polberro, 1½ to 2½; West Polbreen, ½ to ¾; Wheal Kitty (St. Agnes), ½ to ¾; Yeoland Consols, par to ½ prem; West Godolphin, 1 to 1½.

COPPER continues weak, and there is very little doing in shares, the quotations for which remain about the same, and are almost all nominal, with the exception that Crebor and Prince of Wales have become in request. Bedford United, ¾ to 1; Devon Great Consols, 2½ to 2¾. In Devon Friendship the accounts just published to end of July show a balance of liabilities over assets of 3357. 19s. 3d., and among the former is shareholders' mortgage loan allotted, 6199. 10s. In the revenue account from 31st December to 31st July the ores sold were 886 tons of arsenic for 5129. 4s. 1d.; tin, 1021. 17s. 6d.; copper, 492. 5s. 7d.; total, 6943. 7s. 2d. The monthly costs for labour, materials, &c., at the mine, 8946. 14s. 9d.; other charges bringing up the gross to 11,370. 7s. 1d., and a balance carried to balance-sheet, 10,519. 15s. 9d. Gannislake (Clitters), 5s. to 7s. 6d.; Mellanear, ¾ to 1; Marke Valley, 4s. to 6s. New West Caradon, 2s. to 3s.; The New Caradon, 1s. to 2s.; at the meeting the accounts show assets over liabilities (389. 15s. 8d.), included amounts due on forfeited share. The debts owing amounted to 1971., and a call of 1s. per share was made. The report states there are 5 fathoms to drive at the 60 to get under the ore passed through at the 50. West Seton, 5½ to 6; Wheal Crebor, ½ to 1½; the stoping ground in the mine yields in the aggre-

gate 43 tons of copper ore and 21 tons of mundic per fathom. In the winze sinking below the 144 the lode is worth 9 tons of copper ore per fathom, which is an improvement. Prince of Wales has been quiet at 6s. to 8s., but became in demand on Friday, leaving off 9s. to 11s.; the mine is said to show prospects of early and good improvement on the new lode; while the cross-cut is progressing towards the main lode at the 115 fathom level. South Caradon, $\frac{1}{2}$ to $\frac{1}{2}$.

LEAD is not so firm, and there has not been so much doing in shares, and most of them remain at nominal quotations. Vans are quoted $\frac{1}{2}$ to $\frac{1}{2}$; Great Laxey, $\frac{1}{2}$ to $\frac{1}{2}$; Roman Gravel, $\frac{1}{2}$ to $\frac{1}{2}$; Leadhills, $\frac{1}{2}$ to $\frac{1}{2}$; Weardale, $\frac{1}{2}$ to $\frac{1}{2}$; the mines are opening up well. The Grove Rake section has cut rich, especially on the Green Clough vein. A new lode has been cut in the 20 yard level, in driving it in the Red Mine. D'Eresby, 1 to $\frac{1}{2}$, fully-paid; Craven Moor United, 9s. to 11s.; Ecton, $\frac{1}{2}$ to $\frac{1}{2}$; Frongoch, 6s. to 8s.; Great Holway, $\frac{1}{2}$ to $\frac{1}{2}$; Minera, 5 to 7; Standard Lead, $\frac{1}{2}$ to $\frac{1}{2}$; South Darren, 8s. to 10s.

FOREIGN MINES.—Birdseye, $\frac{1}{2}$ to $\frac{1}{2}$; Bratsberg, $\frac{1}{2}$ to $\frac{1}{2}$; Callao Bis, 7s. to 9s.; Cape Copper, 27 to 28; Chile Gold, 4s. 6d. to 5s. 6d.; Colorado, $\frac{3}{4}$ to 3; Colombian Hydraulic, 9s. to 11s.; Copiapo, 2 to $\frac{1}{2}$; Frontino and Bolivia, $\frac{1}{2}$ to $\frac{1}{2}$; La Plata, 4s. 6d. to 5s. 6d.; Mysore, $\frac{1}{2}$ to 2; Nunddroog, 9s. to 11s.; Organos Gold, 6s. to 8s.; Orita, $\frac{1}{2}$ to $\frac{1}{2}$; O-car Gold, $\frac{1}{2}$ to 1; Panulillo, 2 to $\frac{1}{2}$; Richmond, $\frac{3}{4}$ to 4; Schwabs Gully, $\frac{3}{4}$ to $\frac{3}{4}$; Tolima A, $\frac{3}{4}$ to 4; United Mexican, $\frac{1}{2}$ to $\frac{1}{2}$; St. John del Rey, 60 to 65; Potosi, 4s. to 6s.; Ruby, 4s. to 6s.; Victoria Gold, 3s. 6d. to 4s. 6d.; Indian Consolidated, 3s. to 4s.; Santa Barbara, 1 to $\frac{1}{2}$; the advices by cable, dated the 11th, show the produce for the month of July as 3600 oitavas of gold, valued as 1530l. Glenrock, 3s. to 4s.

Mining Notes.

A NUMBER of persons are constantly forwarding us anonymous post-cards and letters in reference to mining men and companies. It is well to state that these are consigned directly to the waste-paper basket. If a communication is not worth endorsing, it is certainly not worth our attention.

At a special general meeting of Cathedral Consols, held at the office in Drapers' Gardens, London, on Thursday, Mr. James Laby in the chair, at which 3114 out of the 3528 existing shares were represented, the special resolutions for suspending the mine, and disposing of the same, with the plant, passed on the 28th July, were confirmed.

THE directors of the Lisbon-Berlyn (Transvaal) Gold Fields Company (Limited) have resolved upon voluntary liquidation, with Mr. G. B. Monkhouse (liquidator of the Transvaal Exploration Company) as liquidator. The proposal is to reconstruct on similar lines to that approved by the shareholders of the Exploration Company.

A PETITION for the winding-up of the Lisbon-Berlyn (Transvaal) Gold Fields (Limited) has been presented to the High Court of Justice by Frederick Robert Pike, of No. 20, Trebovir-road, Earl's Court, Kensington, auctioneer and land agent, a creditor of the company, and the petition is directed to be heard on the 19th inst.

THE directors of the Chontales Company have received advices from their mines dated July 3. The quartz treated at the mill during the month was 400 tons, which produced 98½ ozs. of gold, or yielding on an average nearly 5 dwts. per ton. The gold is valued at 295l. The cost for June is 301l.

News was received yesterday from the manager of the St. Augustine Diamond Mine announcing that the "blue stuff" had been struck and the shipments of diamonds would shortly commence.

THE Richmond Consolidated Mining Company have received the following cablegram from the mine at Eureka, Nevada:—"Week's run (one furnace) \$16,000 from 269 tons of ore; refinery, \$20,000."

THE debenture-holders of the North Mexican Silver Mining Company have passed a resolution authorising the raising of a 7 per cent. preference loan for 20,000l., for the purpose of benefiting or working the mines, or erecting any increased or additional machinery thereon. This has been rendered necessary in consequence of the company having experienced what is a matter of not uncommon occurrence in connection with foreign mining undertakings—that is to say, the expense of opening out the mines and treating the ore, particularly the latter, has been considerably more than was originally estimated. It is believed that the amount of 20,000l. will put the company's property in a paying condition.

THE directors of the United Mexican Mining Company have received the following telegram:—"The excess of returns over outlay of the mine of San Cayetano de la Ovejera for the week ending August 8, \$3100. Remitted 3000l., and four bars silver."

THE manager of the Javali Mine reports that during the month of June 1559 tons of quartz were crushed, yielding 448 ozs. of gold, valued at 1122l. The expenditure at the mine was 1048l.

THE debenture-holders of the Kohinoor and Donaldson Mining Company have confirmed the agreement, which has been before them for some time, modifying, to some extent, the rights of the debenture-holders.

THE proceedings at the meeting of the shareholders of the Richmond Consolidated Mining Company, on Tuesday, were short, and, judging from the few questions which were put, and the general tone of the meeting, the shareholders considered the report fairly satisfactory. As regards the mine itself the exploratory work during the year has not been very extensive, but has been attended with success. In and about the 300 and 400 levels very considerable bodies of ore have been opened up, the quality of which is stated to be very good. Of course the recent increase in the price of lead, slight as it is, has had a beneficial effect on the company's returns. The 1800 tons of lead which were stored in New York, awaiting a better state of the market, have been sold, and the directors have impressed upon the agents the advisability, and indeed the necessity, of reducing the remainder of the stocks held by the company. As regards the long-pending law-suit, between the Albion Company and the Richmond Company, the particulars of which are well known to all the shareholders, there is really very little fresh to state. The matter is still *sub judice*, and appeals having been lodged by the Richmond Company against the recent decision granting a new trial. This appeal is expected to come on some time in September. As regards the amount of damages claimed, which are put at 100,000l., these are regarded by the Richmond Company as exorbitant, and those who know all the facts of the case will probably be disposed to fully endorse that view. Some months ago the Courts assessed the damages at \$13,500 (not pounds sterling); and it may be mentioned that the amount which the Court directed the Richmond Company to find security for, before any proceedings in this case were taken, was \$25,000, and the Chairman at the meeting on Tuesday very fairly pointed out that he could but think that the Court, in fixing that amount, had something before them which would enable them to form something

like an approximate estimate of what the damages really were. At any rate, pending the final decision of this troublesome and expensive litigation, the directors have adopted a wise policy in maintaining the company in a strong financial position by keeping the reserves as they were, at 58,102l., and carrying forward to next year 26,971l.

CAPT. JOSIAH THOMAS, of Dolcoath, has inspected East Blue Hills this week. He confirmed agents' reports, and advised a large addition of stamps, which is very satisfactory.

THE directors of the Pitangui Gold Mining Company (Limited) are in receipt of a cable message from the agents of the company in Rio de Janeiro, dated the 11th inst., advising the amount of produce obtained for the month of July as being 350 oits. of gold. The value of this produce would amount, at 8s. 6d. per oit., to 148l. 15s. sterling.

WEST GODOLPHIN.—The stopes throughout the mine reported upon last week continue in productiveness, being of the same value as then, while the agents report they anticipate some important improvements in the driving of the various ends. There is every prospect, therefore, of the profits made last month being increased. It should be borne in mind that all the dressing of the tin ores raised is carried on by water-power, thus effecting a considerable saving over steam.

NEW COOK'S KITCHEN account, for 16 weeks, was held on Thursday. Financially, the mine remains in the same position as the statement presented at the last meeting. At the last meeting, in answer to Mr. Bailey, of London, the principal shareholder, the manager (Capt. Josiah Thomas) ventured to predict that the current accounts' receipts would be larger than then reported. This has been so, but the difference is certainly not considerable. In copper ore, the main mineral upon which credits here rest, there has been, in fact, a falling off, but in tin an increase is shown. And necessarily in this increase the rise in tin has had an appreciable effect. Although a call of 6s. per share was made, yet a heavy debt was carried forward. The number of Cornish mines in which debts are allowed to be carried forward is growing gradually fewer, and we would that the bull were in every case taken by the horns—that the system of bankers' charges for interest were dispensed with, or that each mine might stand independent of such charges. In many mines the shareholders prefer to have no deficits, but to receive goods from merchants; and, by prompt payment, receive discount. And why not here?

STILL, the report presented at New Cook's Kitchen account was far more favourable than that read 16 weeks since. Then it was said the 175 end had been driven north 5 fathoms towards the north lode—the lode that had been so productive in the mines to the east—and that it was expected to intersect the lode in from 15 to 20 fathoms further driving. Since this was mentioned the agents have driven 21 fathoms further. Although 3½ fathoms behind this end they have passed through a lode 2½ ft. wide, giving some good stones of tin. Captain Thomas thinks the north lode is 3 or 4 fathoms further ahead. It is to be hoped the result will be most satisfactory, for the shareholders deserve success. They have had a long struggle with adversity; Mr. Bailey especially has been a plucky speculator, having paid out a considerable sum in calls; and Captain William Thomas shows his faith in the property by the interest he retains. Then there are other lodes to the north which have only been seen at shallow distances, and it is thought desirable to intersect these at the 175 fathom level also. That this is at a good depth for intersection—as the agents say—is, of course, apparent. The agents have not permitted the ground to grow under their feet in the matter of driving; 6 fms. per month is excellent speed. There is also ground for satisfaction in the fact that in stoping the engine lode above the 160, east of engine-shaft, the agents have found it to be much larger, as well as more productive than it was in the level. A lode 9 ft. wide, and of the value of 30l. per fathom is an excellent augury for future operations. This is the same value as given at the last meeting. The great feature in the mine, as Captain Thomas has again and again pointed out, is in the prosecution of the various lodes in the western part towards the great cross-course. In such a locality as New Cook's Kitchen is situated there should be no fear of the mine ultimately proving a success.

AND the same remark applies to South Crofty. The meeting here was also on Thursday; but the loss was heavy, although labour costs were reduced by 475l., and merchants' bills by 303l. The loss was 1819l., against 1882l., and the debit balance shown was 5902l., as compared with 5346l. four months since. This loss was accounted for, however, by diminished returns of tin consequent on several non-paying points being last time stopped in order to prosecute the most promising part of the sett, and also because of the large expenditure incurred in cutting them and enlarging the shaft. Two months since Palmer's engine-shaft had been in every sense completed to the 205; since then the shaft has been sunk almost 7 fms. This makes the depth 212, and at the 220 Captain Thomas asserts they will be able to open on the middle and north lodes, at which point these lodes will probably be near each other, even if they do not actually effect a junction. Next neighbour to East Pool, it is to be trusted, Captain Thomas's sanguine anticipations of what will be met with in depth in South Crofty will be verified.

THE directors of the St. John del Rey Mining Company have received the following telegram from Morro Velho, dated Rio de Janeiro, 11th August:—"Produce for the month of July, 19,500 oits.; value, 7556l.; yield, 37 oits. per ton. Cuiba—1500 tons stamped; yield, 1-3 oits. per ton."

It will be seen from the usual fortnightly report, published in our columns, that great improvement has taken place at the Holywell District Lead Mine. A correspondent informs us that the ore broken into from the No. 2 cross-cut, at the 80 level, is in character with the "Partridge" east and west vein; this will prove of great importance to the shareholders. At the 110 level good news may be expected during the next few days.

THE half-yearly report of the English and Australian Copper Company (Limited) to December 31 last states that during that period the gross quantity of ore received from various mines was 2937 tons 5 cwt., as against 2743 tons 9 cwt. 1 qr. ore, regulus, and precipitate for the corresponding six months of the previous year. The quantity of ore smelted at Port Adelaide and Newcastle works was 2382 tons 12 cwt., as against 3100 tons 17 cwt. ore, regulus, and precipitate. The quantity of copper made was 432 tons 9 cwt. 1 qr. 4 lbs., as against 713 tons 13 cwt. 3 qrs. 25 lbs. The quantity of copper shipped from and sold in Australia was 432 tons 4 cwt. 1 qr. 4 lbs., as against 713 tons 19 cwt. 2 qrs. The net earnings of this company's wharf at Port Adelaide were 1244l. 17s. 1d., as against 1383l. 14s. for the corresponding half-year. The annexed statement of the six months' working to 31st December, 1884, shows an estimated loss of 1225l. 18s., since which date there has been a further fall in prices affecting both sales of copper and purchases of ore. The reserve fund stands at 6000l.

DEVON Great Consols make a monthly sampling of 750 tons of copper for sale next week.

At Roman Gravel the half-monthly sampling is 100 tons, to be sold next week.

THE four weeks' sale of tin from Drakewalls is estimated at 7 tons, as well as 12 tons arsenical soot.

A MEETING of the shareholders of the Balkis Company was called for yesterday, it being understood that the object was to make arrangements for the reorganisation of the company. We are unable to give our readers, many of whom are Balkis shareholders, any particulars regarding the result of the meeting; inasmuch as our representative, on presenting himself at the door, was told that he could not be admitted without a card of admission, and as he was not possessed of such a document, he was not permitted to enter the room. Now this inability to report the meeting is no deprivation to our general readers, most of whom have probably never heard of the Balkis Company, and those who have no doubt wish they had kept aloof from the undertaking; but on public grounds it is bad policy to refuse admission to the representative of the Press, whose sole object is to give an impartial account of the proceedings for the information of those interested who are unable to attend. It is a silly and unbusiness-like course on the part of those who had charge of the organisation of the meeting.

A CALL of 1s. per share was made at the meeting of the New Caradon, on Thursday. The lodes on this property certainly deserve a spirited trial.

At the sale by auction held on Wheal Hony, by Mr. Spry, on Tuesday, August 4th, there was no offer for these mines, with the plant, machinery, and materials thereon, as a going concern, in one lot. For the 90 in. cylinder-engine 950l. only was bid, and the lot was reserved. None of the heavy pitwork found purchasers, but about 300 miscellaneous lots were sold, many of them at low prices.

EAST HONY Mine (which adjoins Wheal Hony), with the plant, machinery, and materials thereon, was sold by Mr. Spry, on Wednesday, the 5th inst., in one lot for 500l., the fortunate purchaser being Mr. H. R. Lewis, of Bartholomew House, London, the secretary of Wheal Hony and Trelawny.

MR. Henry Moon and Mr. Charles Smith Moon announce that they have established themselves at 22, Fenchurch-street, at Chemical and Mineral Merchants, and agents under the style of Henry Moon and Co.

THE directors of the Santa Barbara Gold Mining Company (Limited) are in receipt of a cable message from Rio de Janeiro, dated the 11th inst., advising the amount of produce obtained for the month of July as being 3600 oits. of gold. The value of this produce would amount, at 8s. 6d. per oitava, to 1530l. sterling.

THERE are in Camborne parish no fewer than 390 ratepayers in arrears of more than one rate, and consequently unable to vote at the approaching election.

We presume that no one was greatly surprised at the announcement last Monday, that the standard had been put down 2s. It was only what, under the circumstances, was to be expected; but it must be borne in mind by the less sanguine of our readers, that these circumstances do not point to any serious reaction, still less to its continuance. Therefore, those who have money to invest, and to whom the chance of a temporary depression is welcome on that account, had better make the best of it. This column is not the place in which to recommend any particular concern. Adventurers ought to be capable of coming to their own conclusions on such details, and if they are in doubt there is never any difficulty in obtaining excellent and trustworthy professional advice. We do, however, feel that it is quite within the province of a general report on the condition of mining affairs to point out that it is really years since there has been afforded such a capital opportunity for investment in a selection of progressive mines. Certainly, it has been a long time since so many ventures of importance were brought at one time so near to apparently assured success.

The rain which has been falling within the past few days, though not continuous, has been very welcome, for in some localities the water supply was getting very short, not only for domestic use but for mining and clay working. It does seem somewhat remarkable, seeing how indispensable water is to mining operations, and how desirable it is there should be a pure as well as good supply, that more heed is not taken to its preservation. There are scores of places where at a very small cost large impounding reservoirs might be made, of the utmost value in dry weather.

The explosion of the reservoir of the air compressor at High-burrow, Carn Brea, though fortunately resulting in no personal damage, has an importance as indicating a modern source of danger in mining operations which we believe has been very generally overlooked. However sound and substantial compressing machinery may be when it is erected time is likely to tell upon it more rapidly than has been commonly imagined, and periodical examination and supervision are very necessary.

The North Cornwall narrow gauge railway is steadily pushing on, and the first section, via Halwill to Launceston, connecting with the South-Western system by its Holsworthy branch, will be finished next year. Practically, about three-fourths of the earthworks on this section, which is about 14 miles in length, have been completed. This, however, of itself will be of very little advantage to the county, and none at all to its mineral interests, until the further extension is made from Launceston to Delabole, Wadebridge, and Padstow, and this is connected on the one hand with the Cornwall Minerals, and on the other with the Liskeard and Caradon. There are a good many difficulties in the way, but none that cannot be overcome.

THERE was a good attendance on Thursday at the meeting of the Devon Friendship shareholders, under the presidency of Mr. J. H. Murchison, F.R.G.S. There was a unanimous feeling respecting the value of the property, and a committee of shareholders was appointed to consult and advise with the directors as to raising the small further sum required to pay off the present liabilities and complete the erection of the new calciner now in the mine. Good profits can then be made, and this would be a step towards the unwatering of the old mine, where hundreds of thousands of tons of stuff will be at once available, from which large returns of profits can be immediately made. Several of the shareholders from the vicinity of the mine attended, and added their testimony to its value, pointing out that crude arsenic is now fetching twice the amount obtained for the average copper of Devon and Cornish mines. The proceedings were of a unanimous character throughout, and there seemed a general determination to make a strong effort to secure to the present proprietors the profits which appear certain to result from a further small outlay.

STOCK AND SHARE LIST.

BRITISH DIVIDEND MINES

Shores.	Paid.	Last wk.	Clos. pr.	Total dows.	Per sh.	Last
12000 Bedford Unit., c, Tavis. (\$11 lab.)	15	0	34	34	0	1
4000 Carn Brea, c, t, Illogan?	15	5	0	34	34	0
4000 Crigant, c, t, Illogan, c, t, Cardigan	5	0	0	34	34	0
1000 Devon Gt. Consols, c, t, Tavitock?	1	0	0	0	0	0
4700 Dolcoath, c, t, Camborne	10	14	71	71	118	7
4000 East Pool, c, t, Illogan	0	9	9	45	73	44
12000 Great Holway, c, t, Flintshire	5	0	0	15	13	13
15000 Great Laxey, t, Isle of Man?	4	0	0	34	34	0
6400 Green Hurth, t, Durham?	0	6	0	34	34	0
9350 Gunnsale (Clitters), t, c	2	2	0	34	34	0
14000 Isle of Man, t, Isle of Man?	5	0	0	0	0	0
9000 Killfretth, t, Chacewaters	4	13	6	14	56	34
30000 Leadhills, t, Lanarkshire	11	0	0	25	25	25
3500 Levant, c, t, Cardigan	18	15	0	0	0	0
4000 Little Laxey, t, Cardigan	18	15	0	0	0	0
10000 Mellencar, c, Hayle?	2	0	0	1	615	0
9000 Minera Mining Co., t, Wrexham?	5	0	0	6	5	4
20000 Mining Co. of Ireland, c, c, t?	7	0	3	15	1	15
12000 North Hendre, t, Wales	2	10	0	0	0	0
8146 Ditto	1	7	6	0	3	18
12000 Phoenix United, t, c, Linkinhorne?	6	6	2	15	15	0
12000 Roman Gravels, t, Salop?	7	10	0	5	4	5
4123 South Carrundrow, c, t, Camborne?	7	5	7	7	12	1
9000 South Darden, t, Cardigan?	1	10	3	8	10	3
4000 Tincort, c, t, Illogan?	14	18	6	7	6	7
6000 East Rasted, c, t, Foggia?	8	3	4	25	2	25
2000 West Killy, t, St. George?	0	10	0	73	73	73
6000 Wheel Agar, t, Illogan	13	6	20	19	20	18
12000 Wheel Greobor, c, Tavitock	2	4	0	0	0	0
1024 Wheel Eliza Consols, t, St. Austell?	13	0	0	0	0	0
6000 Wheel Grenville, t, Camborne	15	0	21	10	11	11
4295 Wheel Killy, t, St. Agnes?	5	12	0	15	10	15
2000 Wheel Pevto, t, Redruth?	1	3	0	15	10	15

FOREIGN DIVIDEND MINES

33000	Almadillo, J. Spain*	2	0	0	13 1/2	13 1/2	13 1/2	5	17	11	0	0	1	3	Mar.	1865	
25000	Amalinda and Tinto Consol., *†	1	0	0	3 1/2	3 1/2	3 1/2	5	6	3	0	0	0	1	May	1876	
20000	Australian, c. South Australia†	7	7	6	2	3 1/2	3 1/2	1	11	0	0	0	0	1	July	1884	
15000	Birdseye Creek, c. California*	4	0	0	13 1/2	13 1/2	13 1/2	1	11	0	0	0	0	1	July	1884	
30000	Bratsberg, c. Norway*	2	0	0	3 1/2	3 1/2	3 1/2	5	11	0	0	0	0	2	June	1885	
20000	California, c. Colorado	1	0	0	3 1/2	3 1/2	3 1/2	5	11	0	0	0	0	2 1/2	Jan.	1884	
20000	Cape Copper Mining	1	0	0	3 1/2	3 1/2	3 1/2	5	3	0	0	0	0	1	Aug.	1884	
65000	Colorado United, c. Colorado*	9	2	0	23	26	23	3	61	17	6	1	0	0	Mar.	1885	
60000	Copiapo, c. Chili† (c. 4 shares)	3	3	0	23 1/2	23 1/2	3	3	14	6	0	1	0	0	May	1885	
32200	El Caliao, c. Venezuela	40	0	0	23 1/2	23 1/2	2	23 1/2	2	9	9	0	0	1	June	1885	
20000	English & Australian, † c. S. Aust.	210	0	0	70	65	70	36	19	4	0	3	4	July	1885		
2000	Eng.-Aus., c. Vict.* pref. (20000 o.)	1	0	0	0	0	0	3	2	9	0	0	0	0	Mar.	1884	
25000	Fortuna, J. Spain†	2	0	0	3 1/2	3 1/2	3 1/2	5	11	0	0	0	3	Apr.	1882		
20000	Frontino & Bolivia, c. New Gran.*†	2	0	0	13 1/2	13 1/2	3	3	12	0	0	2	10	Jan.	1885		
15000	La Placita, c. Nevada†	1	0	0	5 1/2	4 1/2	5 1/2	6	12	0	0	0	0	0	Dec.	1885	
15000	Linares, J. Spain*	1	0	0	5 1/2	4 1/2	5 1/2	6	12	0	0	0	0	0	7 1/2	Oct.	1882
20000	Marbella Iron Ore, c. S. Spain*	3	0	0	4 1/2	4 1/2	4 1/2	19	16	10	0	3	6	Mar.	1885		
15164	Mason & Barry, c. Portugal	10	0	0	2 1/2	1 1/2	2 1/2	0	10	0	0	0	0	0	June	1882	
100000	Montana, * c. U.S.A.	2	0	0	8 1/2	8 1/2	8 1/2	4	3	0	0	0	0	0	May	1885	
20000	New Hoover Hill, c. North Carolina	0	10	0	2 1/2	1 1/2	2 1/2	0	0	0	0	0	0	0	8	July	1884
25000	Oxford, c. Nova Scotia	0	4	0	3 1/2	3 1/2	3 1/2	0	0	0	0	0	0	0	3	May	1885
80000	Quebradi Land & Cop. Venezuel	10	0	0	3 1/2	3 1/2	3 1/2	0	1	3 1/2	0	0	1 1/2	Mar.	1884		
20000	Quandam, c. Chili†	0	1	0	23 1/2	23 1/2	2	2	9	0	0	0	0	0	0	1882	
25000	Pitangui, c. Chile† (c. 6000 £1 pd.)	0	15	0	3 1/2	3 1/2	3 1/2	5	1	0	0	0	0	0	May	1884	
14000	Pontbiquet, c. France	20	0	0	4 1/2	4 1/2	4 1/2	30	3	1	0	11	3	Dec.	1883		
20000	Port Phillip, c. Clunies*	1	0	0	1 1/2	1 1/2	1 1/2	1	14	2	0	0	10	Feb.	1881		
50000	Rara Fortuna, * c. Argent. Republic	5	0	0	3 1/2	3 1/2	3 1/2	5	3	0	0	0	1	July	1882		
15000	Richmond Consol., c. Nevada*	5	0	0	3 1/2	3 1/2	3 1/2	5	3	0	0	0	1	July	1882		
15000	Rio Tinto, c. Mortgage Bds., Huelva. 100	0	3	100	99	100	100	15	1	8	0	0	0	0	Nov.	1884	
20000	Tinto, shares	10	0	3	10	99	100	5	per cent.	0	0	0	0	0	Apr.	1885	
20000	Santa Barbara, * c. Brazil	0	10	0	1 1/2	1 1/2	1 1/2	4	16	0	0	16	0	May	1885		
20000	Schwab Gold, * c. Kimberley	10	0	0	3 1/2	3 1/2	3 1/2	6	10	0	0	1	0	May	1882		
10000	Scottish-Australian Mining Co.*†	1	0	0	2 1/2	2 1/2	2 1/2	20	per cent.	0	0	2	0	Oct.	1884		
25000	Tinto, New	0	10	0	1 1/2	1 1/2	1 1/2	20	per cent.	0	0	1	0	Oct.	1884		
25000	Sierra Buttes, c. California	2	0	0	3 1/2	3 1/2	3 1/2	2	7	0	0	0	6	Oct.	1884		
6682	Tinto, Plumas Eureka	0	0	1	1	1	1	3	3	6	0	1	6	Oct.	1884		
30000	St. John del Rey (c. 25 Stock and multiple debt in)	1	0	60	65	65	65	3	3	6	0	1	6	Oct.	1884		
6000	Tambracherry, * c. Wyndau	1	0	0	3 1/2	3 1/2	3 1/2	5	per cent.	for half-year, June	1882						
20000	Tatis, c. exd, Spain (58730 issued)	2	5	0	4	4	4	0	6	0	0	0	6	Aug.	1882		
60000	Xolima, c. c. Colombia (A shares)†	5	0	0	5	5	5	7	6	6	0	0	0	May	1885		
6000	Tinto, c. c. Colombia (A shares)†	5	0	0	5	5	5	7	6	6	0	0	0	May	1885		
821	United Mexican, c. S. Austr.	5	0	0	2 1/2	2 1/2	2 1/2	1	5	3	0	0	5	Jan.	1885		
20000	Victoria (London)	9	17	6	2 1/2	2 1/2	2 1/2	0	5	0	0	2	6	Jan.	1885		
20000	Western Andes, c. Colombia	1	0	0	7 1/2	5 1/2	7 1/2	3	13	10	0	0	5	Feb.	1881		
2100	W. Prussian (5600 pref. sh. £10 pd.)	0	0	0	4 1/2	4 1/2	4 1/2	4	16	3	0	10	5	Aug.	1884		
14000	Yorke Pen., c. South Aust. Pref., c.	1	0	0	3 1/2	3 1/2	3 1/2	4	2	0	0	0	0	Apr.	1881		
	* Have made calls since last dividend							0	3	0	0	0	0	May	1882		

\$ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES

Shares.	Paid.	Last wt.	Clos.
12000 Anderson, <i>s, c, l</i> , Devonshire	0 8 0	13½	¾
12000 Ashteton, <i>l</i> , Carnarvonshire	5 0 0	—	—
3200 Blue Hills <i>s, c, St. Agnes</i>	4 18 6	13½	1 1
10000 Bradu, <i>s, l</i> , Is of Man	1 0 0	—	—
30000 British, <i>s, l, St. Wexham</i>	1 0 0	—	—
20000 British Manganese Company*	1 0 0	—	—
10000 Burnhope, <i>s, l</i> , Edmondbyers	0 10 0	23½	1½ 2
12000 Collacombe Consols, <i>c, St. Lamerion</i>	0 2 8	—	¾
50000 Cambrian, <i>s, l, c</i> , Cardigan	2 0 0	—	—
50000 Carn Camborne, <i>s, c, c</i> , Camborne	1 0 0	¾	¾
37400 Carnarvonshire Cons., <i>s, l</i> , Llanrwst.	2 0 0	14½	¾
6400 Cathwell, <i>l</i> , Lumberland	2 19 0	13½	1½ 1
16000 Central Foxes, <i>s, l</i> , Isle of Man	2 4 0	—	—
40000 Clifford Amalgamated	17 6	—	—
50000 Goed-v-Pedw-Pant-v-Buarth	1 0 0	13½	1½ 1
24500 Gook's Kitchen, <i>t</i> , Illogan	1 0 0	—	¾
32007 Craven Moor Uni., <i>s, l</i> , Pateley Edge	1 40 0	10½	9½ 10
50000 Creiglog, <i>l, c, St. Denbighshire</i>	0 17 0	11½	9½ 11
38400 Crook Burn, <i>s, l</i> , Cumberland	0 17 0	—	¾ 1
12000 D'Eresby, <i>s, l, St. Llanrwst</i> 21 share	0 10 0	13½	1 1
50000 Devon Friendship, <i>s, c, arr</i> , Tavistock	1 0 0	2½	1½ 2½
50000 Drakevalley, <i>s, c</i> , Calstock	0 15 0	3/8	3/ 5
50000 Duchy Porro, <i>s, St. l, s</i> , Cornwall	1 0 0	13½	¾ 1½
12000 East Blue Hills, <i>t</i> , St. Agnes	0 7 0	13½	1½ 2
6000 East Botallack, <i>t, St. Just</i>	1 2 6	—	—
814 East Caradon, <i>c, St. Cleer</i>	5 7 6	—	—
5000 East Devon Cons., <i>c, c</i> , Buckfastleigh	2 0 0	¾	¾ 1
15000 East Trengem, <i>c, c</i> , Marazion	0 6 5	¾	¾ 1
5000 East Wheel Lovell, <i>t</i> , Helston	0 3 8	¾	¾ 1
25000 Ecton, <i>s, c</i> , Weton	1 0 0	1	¾ 1½
2500 Frongoch, <i>s, l</i> , Cardigan (11000 sh. Iss.)	2 0 0	3/3	6/39
2000 Gawn, <i>s, c</i> , Tavistock	2 0 0	¾	¾ 1
40000 Glasg. Car., <i>c</i> (30000 sh. £1 pd. 18000 Iss. p. l.)	15 0 0	¾	¾ 1
50000 Gobbett, <i>s, l</i> , Devon	1 0 0	¾	¾ 1
50000 Gogdards, <i>s, l, c</i> , Carnarvon	1 0 0	—	—
50000 Goginan, <i>l</i> , Cardiganshire	1 2 0	¾	¾ 1
50000 Goodvere, <i>t, St. Cleer</i>	1 0 0	13½	1 1½
50000 Great West Oliverton, <i>t, St. Agnes</i>	0 6 5	¾	¾ 1
50000 Great W. Shepherds, <i>l</i> , Cornwall	1 0 0	1	¾ 1
50000 Grogwinion, <i>c</i> , Cardigan	2 0 0	—	—
50000 Gwyn-v-Mynydd, <i>s, c, l</i> , Flint (pref.)	4 0 0	¾	¾ 1
8400 Hardshins, <i>s, l</i> , Westmore. (10s. sh.)	0 7 8	1	¾ 1
5000 Holywell District, <i>l</i> , Flintshire	1 0 0	1	1½ 1½
5000 Lady Ann, <i>s, s, l</i> , Llanarmon	1 0 0	—	—
5000 Llandegais, <i>s, l</i> , Wales	1 0 0	—	—
5120 Lovell, <i>t</i> , Wendron	2 1 0	¾	¾ 1
5000 Marke Valley, <i>c</i> , Linkinhorne	8 7 0	6½	4/ 6/
5000 Mona, <i>s, c</i> , Anglesea	9 0 0	—	—
5000 Mona Consols, <i>c, c</i> , Anglesea	1 0 0	—	—
5000 Mostyn Consols, <i>s, s, l</i> , Flint	1 0 0	—	—
5000 Morfa Du, <i>s, s, c</i> , Anglesea	1 0 0	—	—
5144 Mount Carbis, <i>t, c</i> , Redruth	1 19 8	—	1 1/2
5000 New Caradon, <i>c, St. Cleer</i>	0 8 3	2½	1/ 2½
5000 New Gook's Kitchen, <i>t</i> , Illogan	10 18 6	¾	10/ ¾
5000 New Dolcoath, <i>t, c</i> , Camborne	3 0 0	—	—
5000 New Holmbooth, <i>s, c</i> , Callington	4 0 0	—	—
5000 New Kiddy, <i>t, St. Agnes</i>	1 13 0	12½	¾ ¾
5000 New Langford, <i>s, c</i> , Callington	0 4 0	2s.	1s. 2s.
5000 New Redmoor, <i>s, c</i> , Callington	1 0 0	—	—
5000 New Terras, <i>s, St. Austell</i>	2 0 0	2½	2 2½
5000 New Tincroft, <i>s, l</i> , Lelant	6 0 0	—	—
5000 New Trumpet, <i>s, l</i> , Wendron	7 0 0	1	¾ 1
5000 New Van Cons. & Glyn, <i>s, l</i>	7 0 0	—	—
5000 New West Caradon, <i>c</i> , Liskeard	0 8 9	3/	2/ 3/
5000 New Wheel Pevor, <i>t</i> , Redruth	0 10 0	—	—
5000 North Blue Hills, <i>t, St. Agnes</i>	0 2 6	2s.	1s. 2s.
5000 North Bury, <i>t, c</i> , Scorrier	2 8 5	2s.	1s. 2s.
5000 D'Erres Mount, <i>s, l, St. Llanrwst</i>	1 0 0	—	—
5000 North Goginan, <i>s, l</i> , Cardiganshire	1 0 0	—	—
5000 North Grear, Huch	1 0 0	—	—

NON-DIVIDEND MINES—continued[illegible]

bl, blende; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate.
s-l, silver-lead; *t*, tin; *z*, zinc; *i*, iron; *a*, arsenic; *d*, diamond.
 *Limited Liability Companies; † quoted on the Stock Exchange.
 I have paid dividends.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid	Unpaid
15000	Akakoo, *g, Gold Cal. (100000 lss.)	1	0 00
15000	Anglo-African, d, Kimberley, *f	10	0 00
120000	Asia Minor, *f, Ladjess, Sivas	0	17 00
200000	Balks, *g, Transvaal	1	0 00
24000	Belt, *c, Lake Sup. (220 00 & paid)	5	0 00
20000	British Australian, *g, N. So. Wales	1	0 00
10000	Bueno Ventura, *f, Spain (fy. pd.)	2	0 00
150000	Calico Bk, *g, Venezuela	0	00 75
132500	Canadian, *c, Canada	4	00 50
120000	Chile, *g, Venezuela (New York)	1	3 00
125000	Chontales, *g, Nicar. *f (100000 lss.)	1	3 00
75000	Colombian Hydraulic, *g, Colombia	1	00 90
200000	Devala Moyal, *g, Wynnadt	1	00 50
75000	Devala Provident, *g, Wynnadt	0	10 50
	Don Pedro North of the Rey *	0	00 25
214000	Eberhardt, *g, Nevada *f	1	00 50
50000	Eureka, *g, Nevada	1	00 50
40000	Georgia, *g, United States	1	0 00
85000	Gold Coast, *g, Wamau	1	0 00
50000	Gold Hill, *g, North Carolina	1	0 00
40000	Indian Consolidated, *g	1	0 00
30000	Ind. Glenrock, *g, Wamau	1	00 50
10000	Iron Gate, *c, chr, Hupper	1	00 00

HOME RAILWAYS.

ORDINARY SHARES AND STOCKS.

Percent amount	£	s.	d.	Closing quotation Last week
10,856,970	..	..	..	98½ 98½
14,991	£20	..	..	98½ 98½
375,000	..	..	..	5½ 4½
2,642,000	..	..	..	302 99
4,927,900	..	..	..	97 97
12,354,547	..	..	..	62½ 63½
8,867,377	..	..	..	101 107
1,159,737	..	..	..	98 98½
1,000,000	..	..	..	152 147
19,211,670	..	..	..	112 110
1,722,995	..	..	..	155½ 137
3,300,000	..	..	..	3½ 3
35,925,995	..	..	..	108½ 108½
2,171,550	..	..	..	116 116
2,171,850	..	..	..	159 137
11,123,051	..	..	..	97½ 98½
26,784,827	..	..	..	154 154
9,704,161	..	..	..	167½ 12½
..	..	..	..	126½ 126½
..	..	..	..	155 153
5,833,856	..	..	..	64 64
..	..	..	..	98 96
5,281,830	..	..	..	30½ 30½
83,270	..	..	..	106½ 106
83,270	..	..	..	— —
2,250,000	..	..	..	38½ 37½
26,428,079	..	..	..	13½ 13½
4,525,869	..	..	..	90½ 89½
22,811,353	..	..	..	151½ 150½
2,232,000	..	..	..	89½ 87½
237,450	..	..	..	155 157
3,170,870	..	..	..	112 114
2,869,570	..	..	..	143 143
2,869,870	..	..	..	87½ 89½
1,403,200	..	..	..	270 257

BANKS

Issue, Shires,		FD	Cia. pr.
10000	10 Agre [L]	all	95 10
80000	20 Anglo-Egyptian Banking [L] ..	all	105 17
40000	40 Bank of Australasia	all	82 94
12500	30 Bank of British Columbia	all	23 24
10000	30 Bank of British North America ..	all	55 57
12 00	25 Bank of Egypt	all	24 26
15000	20 Bank of New South Wales	all	66 68
100000	10 Bank of New Zealand	all	35 37
32000	25 Bank of South Australia	all	35 37
20000	50 Bank of Victoria	25 34	30
40000	20 Chartered of Ind., Aust., & China ..	all	115 125
30000	25 Ch. Merc. of Ind., Lond., China, all	108 110	22 24
100	100 Colonial Bank of Rio de Janeiro [L]	30	42 45
50000	20 English Bk. of Rio de Janeiro [L]	16	12 13
50000	20 London and River Plate [L]	10	135 145
80000	7 London and South Africa	all	15 15 1/2
100000	10 London Chartered of Australia	21	21 1/2
10000	10 National Bank of N. Zealand [L] 3/4	1 1/2	1 1/2
30000	10 Queensland National [L]	8	11 11 1/2
40000	10 Standard of South Africa [L]	25 35	35 35
60000	75 Union of Austria	29 35	70 72

TELEGRAPH COMPANIE

Stk.	Company	Pd.	Chgs.	Pr.
10	Anglo-American	10	0	28 1/2
10	Brazilian Submarine	10	0	28 1/2
10	Cuba	10	0	11 1/2
10	Direct Spanish	10	0	12 1/2
20	Direct United States Cable ..	20	0	1 1/2
10	Eastern	10	0	8 1/2
10	East. Exten. Austr. and China	10	0	11 1/2
10	German Union	10	0	12 1/2
10	Great. Northern of Copenhagen	10	0	3 1/2
25	Indo-European	25	0	10 1/2
10	London Platina Brazilian	10	0	3 1/2
8	Reuter's [L]	8	0	7 1/2
10	Submarine	100	0	180 1/2
Stk.	United Telephone [L]	100	0	11 1/2

IRON AND COAL COMPANIES.

<i>Shares.</i>	<i>Company.</i>	<i>Prisd.</i>	<i>Price.</i>
100	Abbot, John, and Co.	75 0	44½ 44
100	Asbury Co. [L] (new)	99 0	30 31
3	Bagnall, John, and Sons [L] ..	3 0	
10	Benhar Coal Co. [L]	10 0	
10	Bilbao River & Cantabrian R. Co. 10	0	6½ 7
20	Bolton, Vaughan, & Co. [L] A	12 0	8½ 8½
50	Brown, Bailey, and Co. [L] ..	40 0	
100	Brown, John, and Dixon [L] ..	75 0	59½ 59½
100	Cammell and Co. [L]	80 0	78½ 79
20	Cannock & Huntington [L] ..	10 0	10½ 10
10	Central Swedish Iron & Stl. [L]	10 0	
50	Charlot. Iron Co. [L]	50 0	
10	Chillingham Iron Co. [L]	10 0	1½ 0
10	Consett Iron Co. [L]	7 10	18 18
1	Consett Spanish Iron [L]	1 2	4½ 4½
20	Darlington Iron Co. [L]	18 10	23½ 25
5	Deale & Co. [L]	20 0	3¼ 4
5	English Crown Spelter [L]	5 0	1½ 2
1	Genl. Mining Co. [L] (fin. pd.)	5 0	4½ 4½
50	Knowles, Andrew, & Co. [L]	5 0	5½ 5½
20	Livny and Tondul [L]	20 0	1½ 2
10	Lydney & Wigpool Iron Ore Co.	13 0	3½ 4
10	Midland Iron Co. [L]	5 0	
10	Monkland Iron & Coal Co. [L]	10 0	2½ 3
4	Mwyndy Iron Ore [L]	3 15	3½ 3½
62½	Nant-y-Glo & Blaenau (Sp. c. pr.)	62 10	39 40
10	Newbuda Coal and Iron [L] ..	9 0	1½ 2
35	Newport & Brecon Coal Co. [L]	40 0	7½ 8½
100	Palmer's Shipping & Iron [L]	15 0	23½ 23½
20	Parkgate Iron Co. [L]	67 0	60½ 60½
20	Patent Nut and Bolt [L]	17 0	17½ 17½
50	Pearson and Knowles, B.	50 0	25 27
20	Pelsall Coal and Iron [L]	20 0	4½ 4½
5	Rhymney Iron Co. [L]!	5 0	¾ ¾
6000	St. Helen's Coal & Clay Co. [L]	1 5	
100	Sandwell Park Colliery Co. [L]	10 0	
100	Shotts Iron Co. [L]	130 0	35 40
100	Sheepcote Iron and Coal [L]	22 0	4½ 5
50	Silkeston & Don. Cl. & Iron [L]	45 0	
5000	Somerset Iron Co. [L]	5 0	12 15
100	Staveley Iron and Coal Co. [L]	10 0	49½ 50½
100	ditto ditto B.	10 0	8½ 9
5	Teesside Iron & Engine Works	5 0	5 5
100	Tredgare Iron and Coal, A [L]	38 0	18 18½
25	ditto ditto B.	25 0	16 16½
10	Vancouver Coal [L]	8 0	2½ 3½
25	West Cumberland Iron & Stl. [L]	22 0	2½ 2½

TRAMWAYS

Shares.		Fm. Clus. per.	
0000.	8	Anglo-Argentine [L]	all 6
0000.	10	Barcelona [L]	all 9
2600.	10	Belfast Street Tramways	all 11
3012.	10	Birkenhead, Ordinary	all 14
3000.	10	Ditto, 6 per cent. Preference	all 4
9000.	2	Brazilian Street Railways	all 14
0000.	10	Bombay [L]	all 8
0000.	10	Bordeaux Tram & Omnibus [L]	all 8
0050.	10	Buenos Ayres [L]	all 4
0000.	10	Caleta [L]	all 9
1870.	10	Dublin	all 11
0880.	10	Edinburgh Street Tramway	all 15
0000.	10	Glasgow Tramway & Omni. [L]	all 9
0000.	10	Hughes-Loco. and Tram. works	all 15
0073.	10	Hull Street Tramways	all 7
7776.	6	Imperial [L]	all 1
0000.	10	Liverpool Unit. Tram & Om. [L]	all 10
880.	10	London [L]	all 16
0000.	10	London Street Tramways	all 18
0000.	10	Great Metropolitan	all 18
0000.	10	Nottingham and District [L]	all 5
500.	10	Provincial [L]	all 6
0000.	10	Sheffield	all 3
0000.	10	Southampton	all 8
0000.	10	Sunderland [L]	all 3
0000.	10	Swansea	all 3
012.	10	Tramways of France [L]	all 3
017.	10	Tramways of Germany [L]	all 13
0000.	5	Tramways and Gen. Works [L]	all 1
0000.	5	Tramways Union [L]	all 3
0000.	10	Valle of Clyde	all 6

FINANCIAL AND INVESTMENT.

Issue, Shares			Pd.	Class, per
49150	10	Aus. Mort. & Agency [L]	Eng. issue 2 ...	2 1/2 2 3/4
20000	25	Australian Agricultural	21 1/2 ...	125 130
100000	10	Aust. & New Zealand Land [L]	Shs 1 ...	1 1 1/2
101980	85k	Deb. 4 1/2 per cent. Deb. Stock...	103 ...	98 100
25000	25	Aust. Mort. Land & Finance [L]	Shs 1 ...	5 16 17
592000	85k	Deb. 4 1/2 per cent. Deb. Stock 1000	103 ...	99 101
64-2	1	Canada Comp...	1 ...	81 8
76 425	10	Canada North West Land [L]	Shs 1 ...	2 2 1/2
130000	1	Central Argentine Land [L]	Shs 1 ...	2 2 1/2
77000	5	Colon. Inv. & Ag. of N. Zealand [L]	Shs 1 ...	1 1/2 1 3/4
2424-568k	1	Foreign & Col. Gov. Trust [L]	Pref. 100 ...	118 121
1167-578k	1	Do. Doferred	100 ...	116 119
20001	1	General Comd. and Discount [L]	3 1/2 ...	3 1/2 3 3/4
25000	10	Land Corporation of [L]	Shs 1 ...	1 1 1/2
1000-10	3k	London & S. African Explor. [L]	Shs 1 ...	7 7 1/2
36035	50	London Financial Association [L]	4 1/2 ...	1 1/2 2 1/2
45000	10	Manitoba Mort. & Invest. [L]	Shs 1 ...	1 1/2 1 3/4
100-00	10	Queensland Invest. & Land Mort.	100 ...	3 3 1/2
200000	81k	Scottish Australian Invest. [L]	100 ...	210 220
200000	50	5 p. c. Guaranteed Pref.	100 ...	112 117
200000	82k	Do. Do. per cent.	100 ...	112 117
100000	10	S. Aust. Land Mort. & Agency [L]	Shs 1 ...	1 1/2 1 3/4

INSURANCE COMPANIES.

Issue, Shares.		PM.	Clos.	pr.
50000	10 Alliance Marine	4	22½	23½
50000	20 British and Foreign Marine [L] ..	4	12	28
50000	50 Commercial Union	15	15	15
50000	50 Eagle	5	6	18
5000	10 Globe Marine [L]	2	1	1½
27500	100 Imperia Life	10	23	24
13453	100 Indemnity Marine	50	14	16
130000	100 Lion Fire [L]	1½	96	96
35862	20000 Liverpool & London Globe (21 anny) ..	2	24	25
40000	25 London and Lancashire	12½	4	4½
40000	25 London and Provincial Marine [L] ..	2	3½	4½
40000	25 Marine [L]	4½	27	28
50000	100 Merchants' Marine [L]	2	1	1½
50000	100 Maritima [L]	2	2	3½
100000	25 North British and Mercantile	6½	30½	31½
40000	100 Northern	10	41	41
40000	100 Northern Marine	5	11½	11½
6722	— Phoenix	—	207	212
40000	10 Queen	1	2½	2½
100000	10 Railway Passengers	33½	8	8½
50000	50 Rock Life	¾	7	7½
5000	100 Sea	2	—	—
135000	50 Lancashire	2	4½	6
5000	100 Standard Marine	4	—	—
100000	25 Thames and Mersey Marine [L] ..	—	11½	11½
40640	20 Union Marine, Liverpool [L] ..	2½	4	4½
63000	30 Universal Marine [L]	2	7½	8½

GAS COMPANIES.

Sums, Shares.		Pd.	Clos. pr.
5000...	20..Bahin [L].....all...	24½	25½
10000...	5..Bombay [L].....all...	5½	7
00000...	5..Ditto, New [L].....4...	5	5½
00000...	500..Brentford Consolidated.....100...	219	220
10000...	20..British Gas.....all...	205	205
00000...	80k..Commercial Consolidated.....all...	265	269
00000...	20..Continental Union [L] Orig.-all...	41	41
00000...	20..Do. do. New, 1869, 1872...all...	27½	28½
00000...	20..Do. do. 7perct. Preference...all...	32	34
2468...	10..European [L].....All...	21	23
4550...	500..Gaslight and Coke, A. Ord...100...	252	237
00000...	80k..Do. 4 per cent. Gen. Stock...100...	1	1½
00000...	10..Hong Kong and China.....all...	5½	10
00000...	80k..Imperial Continental.....100...	212	215
2000...	5..Malta & Mediterranean [L]...all...	5	5½
00000...	5000..Metrop. of Melbourne p. c. Deb...all...		
00000...	20..Monte Video [L].....all...	18½	17½
00000...	5..Ottoman [L].....all...	5½	6½
00000...	5..Oriental [L].....all...	8½	9
7500...	1000..Rio de Janeiro [L].....all...	23	24
00000...	80k..South Metropolitan.....all...	279	284
00000...	80k..Ditto, ditto.....all...	233	237

MISCELLANEOUS

	Company.	Prod.	Price.
	Anglo-American Brush	8 0 ...	1½ 3
	Do do	10 0 ...	3½ 3½
\$0	Ten's & Glas. Engin. & Iron Ship	25 0 ...	15 18
10	Noble's Explosives [L]	10 0 ...	15½ 16½
5	Swan United Electric	3 0 ...	5½ 6
12	Tel. Con. & Maintenance [L]	12 0 ...	37 38
10	United Asbestos	10 0 ...	
10	Yon's Paraffin Light & M. O.	8 0 ...	11 12

Law Intelligence.

HIGH COURT OF JUSTICE.

CHANCERY DIVISION.—AUGUST 8.
(Before Vice-Chancellor BACON.)

RE THE GUINEA COAST GOLD MINING COMPANY.

In this case Mr. Marten, Q.C., on behalf of Mr. D. Marshall, petitioned the Court for an order for the winding-up of the above company. The petitioner was the holder of 200 fully paid-up shares. The company had passed a resolution for the voluntary winding-up on the 16th July, the petition was presented on 29th, and the confirmatory meeting held on the 31st of the same month.

Mr. HORACE DAVEY, Q.C., M.P., for the company and liquidators elected by the shareholders in the voluntary winding-up, said that the petition contained serious charges against the directors and liquidators, and they had not had time to answer them. He should, therefore, ask for an adjournment unless his learned friend consented to a supervision order.

Mr. MARTEN said he had considered the matter, and was of opinion that it was best for him to accede to that proposal.

Order made accordingly.

AUGUST 10.

(Before Mr. Justice PEARSON.)

RE THE OLATHE SILVER MINING COMPANY.

In this case Mr. Cozens Hardy, Q.C., (with him Mr. Buckley), on behalf of the liquidators of the company made an application for the sanction of the Court to a compromise arranged between all the parties of the company, and for the winding-up order to be obtained on terms. The learned counsel stated that after the winding-up order had been made proceedings were taken under the sanction of the Court to ascertain the wishes of the various parties, and for that purpose meetings were held with the liquidator in the chair with the result that though he could not say that there had been absolute unanimity at the meetings he thought he was entitled to say that there had been an unusual amount of unanimity. Four of those present shareholders, representing 52,984l., were in favour of the arrangement and 616l. against; of the debenture-holders those representing 951l. were in favour and 36l. against, and out of the four unsecured creditors present, three representing debts to the amount of 875l. were in favour and one in debt for 5l. against. The proposal contained in the agreement was for a new company to be formed to take over all the assets, goodwill, mine, and property, from the old company. The debenture-holders in the old company to accept new debentures in the new company on certain terms, and an arrangement was to be made with some of the past directors and other persons who were interested in the promotion against whom there were claims made by the company, and some of whom had counter claims by which they were to be released on terms. Mr. Carter, the principal person interested, agreeing to promote the release of a certain number of debentures of the old company and the giving up of 13,000l. worth of shares which he either held or had control over. It was further arranged that the debentures thus released should be used as a bonus for the new debentures, the holders of which were willing to find a sum of 5000l. cash which was necessary for the working of the scheme. Finally it was agreed to pay the Committee of Investigation, who had been put to a great deal of trouble in the matter, the sum of 200l. The above were the terms of the agreement which had been come to, and he now asked his Lordship to sanction it.

Mr. Justice PEARSON did so.

AUGUST 11.

(Before Mr. Justice KAY.)

RE THE CHILLINGTON IRON COMPANY.

In this case Mr. Pearson, Q.C., applied on behalf of certain contributories of the above company for the discharge of an order refusing his clients' inspection of the books of the company. The matter came before his Lordship on 23rd July last, when an order was made by which it was directed that the liquidators should convene a special meeting of the company to take into consideration whether or not there should be an inspection on behalf of the contributories. Before the order was drawn up certain letters were received from the directors and official liquidators in which they withdrew their objections, and stated that it would be useless to convene a meeting as the directors held sufficient shares to give them a majority of votes.

Mr. Graham Hastings, for the liquidators, acquiesced to the above statement.

Mr. Justice KAY, therefore, discharged the order of the 23rd of July.

(Before Mr. Justice CHITTY.)

IN RE COPPER QUEEN UNITED (LIMITED.)

Resolutions having been passed for the voluntary winding-up of this company an order was made for the continuation of the voluntary winding-up under the supervision of the Court.

Mr. Macnaghten, Q.C., Mr. Romer, Q.C., Mr. W. P. Beale, and F. B. Palmer were the counsel appearing.

IMPORTANT TO MINING ENGINEERS.

ALLEGED BREACH OF CONTRACT.

At the Birmingham Assizes, on Monday, Tuesday, and Wednesday (before Mr. Justice SMITH), an action for breach of contract, brought by Mr. J. S. Dugdale, Q.C., and Mr. C. G. Dugdale, trustees under the will of the late Mr. Dugdale, of Merevale Hall, Warwickshire, and as such proprietors of the Baddesley Colliery, near Atherstone, against Mr. F. C. Gillett, mining engineer, Derby, was heard. It will be remembered that a fire and explosion occurred at the colliery in May, 1882, when a great many lives were lost, and a considerable amount of damage was done. Plaintiffs alleged that this was due to the want of skill and negligence of the defendant, and they claimed 6507l. 4s. 11d. damages. Mr. H. Matthews, Q.C., Mr. Mellor, Q.C., M.P., and Mr. Graham, appeared for the plaintiffs; and Mr. Jelf, Q.C., and Mr. A. T. Lawrence appeared for the defendant.

The defendant was consulting engineer at plaintiffs' colliery at a salary of 190 guineas a year and travelling expenses, and plaintiffs' statement of claim alleged "that the defendant did not supervise the works of the colliery in a reasonable, skilful, and careful manner; that he did not give his best or reasonably proper attention to the safe working of the colliery; and, further, that he negligently and unskilfully caused an engine and boiler to be erected and worked in such a part of the colliery and in such a manner that by his neglect of proper precautions the coal in the colliery was set on fire."

For the plaintiffs, the following professional evidence was given:—Mr. REUBEN SMALLMAN, mining engineer, Camp Hill Grange, Nuneaton, said that he succeeded Gillett as engineer at the mine after the explosion in May, 1882. He made frequent examinations at the colliery and the scene of the fire. He described the condition in which he found the colliery, and said that in his opinion the action of the defendant in causing the boiler to be placed at the bottom of the return air-course was such as would most probably cause the shaft for a long distance to be in a highly dangerous state. When the defendant visited the place on the 26th April the return air-course must have been in a dangerous condition. The proper thing to have done was to stop the boiler at once, and make a proper examination of the return air-course. Steps should have been taken to secure the safety of the mine. Those means of safety would have depended on the result of the examination. If proper steps had been taken on the occasion of Gillett's visit to the colliery on the 26th April the accident could have been prevented. The coal was ready then, no doubt, to burst into a flame, but it had not actually ignited. The danger of explosion by fire could also have been obviated. It was not a prudent thing to put the boiler in the position it occupied. Taking the state of things as described on the 26th April he should not have dared had he been in Mr. Gillett's position to have left the colliery without a proper examination. The

water was now raised by means of a pump worked by a "clip" pulley. The same rope that drew up the tubs worked the pulley. The water could have been got rid of without recourse to the boiler. He thought the doors between the return air-course and main incline were blown down by a slight explosion in the return air-course before 10 o'clock on the night of the 1st May, when Charles Day was in the pit, and discovered smoke in the incline.

By Mr. JELF: If he had gone to examine the mine as consulting engineer he would have required all the facts to be placed before him. It was a material circumstance for Gillett on his visit on the 26th April to know that for a fortnight there had been fire in the roof over the boiler, and that it had never gone out. Gillett might have seen the fire himself; and knowing the facts, he ought to have taken measures to stop it. Witness would have drawn the men from the mine, and having selected the best hands would have gradually proceeded to examine the place. It would not have been too late on the 27th or 28th April to have taken steps to put the fire out. If at any time before the great outbreak of fire steps had been taken to prevent an accident one would not have occurred. It was improper to allow the fire to go on, and he was convinced the mischief might have been prevented on the 27th April. Any person practically acquainted with the working of collieries must have known that all the mischief might have been stopped during the fortnight preceding the explosion over and over again by stopping the boiler. If the boiler had only been used eight hours in the week the danger would have been reduced to a minimum. But there would still have been danger. Spontaneous combustion was a chemical action, but it would be accelerated by external heat.

Re-examined by Mr. MATTHEWS: In his judgment the defendant's knowledge of the state of the fire and the use of the hose on April 26 imperatively called upon him to take some steps. Witness himself would have stopped the boiler at once.

Mr. ARTHUR HENRY STOKES, Assistant Inspector of Mines for the Midlands Counties, said that during his 13 years' experience he had never seen a boiler placed in the position this particular boiler was in. Witness was not aware until after the explosion that the boiler was at the bottom of the return air-course. In his opinion no prudent engineer would have allowed a boiler to be placed in such a position, considering the state of the mine. From the liability to spontaneous combustion and the surroundings of the mine, it was an unpardonable error to put the boiler there. In witness's opinion, directly fire was put under the boiler the whole air-way would become a chimney flue, and there would be day by day an increasing amount of what he should term latent fire, which only required a match to set it in flames. Sooner or later the return air-course would certainly have taken fire, and the patch of fire close to the chimney simply acted as the match. Assuming the boiler to have been worked from April 14, in witness's judgment a man of superior intelligence in his profession, as Mr. Gillett was acknowledged to be, knowing that the place was liable to spontaneous combustion, that upon the return air-course probably depended the safety of many lives, and that the instructions he gave had not been carried out, ought to have insisted upon making a thorough examination. It would not be the defendant's duty to examine the place himself, but he should have given instructions for an examination to be made, and have seen that those instructions were carried out.

Mr. THOMAS EVANS, Chief Inspector of Mines in the Midlands, residing at Derby, said that he had had upwards of 30 years' experience. He had examined the Baddesley Colliery many times. Parker was underwriter of the colliery up to 1872, when the Mines Regulation Act was passed. That Act made it imperative for every colliery to have a certificated manager, and certificates were then given to persons in Parker's position. Those certificates were called certificates of service. He did not think Parker was competent to take the management of the colliery. It was not prudent to place the boiler in the position it occupied, and it was attended with considerable risk and danger. It would not have been prudent to place it there even if there were a brick arch over it. Any prudent engineer would have made an examination of the air-course.

By Mr. JELF: Pogmore's name was in witness's official report as agent of the colliery, and Parker's as the manager. It was an error to say that Pogmore was the agent. In respect to other collieries, Mr. Gillett was returned as agent.

Mr. JELF: So that in those cases in which Mr. Gillett says he is the agent he is returned as such; but in this case he says he is not the agent, and he is not returned as such. The report, therefore, seems to bear out what he says.

Re-examined by Mr. MATTHEWS: For any breach of the Act the owner and agent were liable as well as the manager. The general supervision of the mine was the duty of the manager, but the responsibility of the mine must be taken by the agent. It was part of the duty of the agent to visit the colliery when required, and give his attention to its safe working.

Mr. JELF, Q.C., having opened the case for the defence, called the DEFENDANT, who said he had practised as a mining engineer for 35 years. In 1878 he became consulting engineer at the plaintiffs' collieries. It was his duty as a consulting engineer to visit the collieries and superintend the works from time to time as circumstances might require. It was not suggested by Mr. Pogmore that he was to take any other duties than those of consulting engineer. In the latter capacity he had no control over the certificated manager. He could only give him advice. He had no power to dismiss workmen or do anything more than advise the manager what course he should pursue. He related the circumstances which led to the erection of the vertical boiler being suggested by Parker, and said that he told Parker he considered it objectionable to place the boiler in the return air-course, on the ground that it would render the air-course difficult to examine, and he was also afraid it would affect the roof of the mine. Parker said he did not think it would, and he further pointed out that the engine would not be required to work more than one day a week. Witness made a calculation, and found that one day's work a week would be sufficient to pump out the water. He accordingly consented to the erection of the boiler, and proposed that a strong arch of brickwork should be put in, so as to enclose the engine, that all the coal in the floor of the mine and also in the upper part should be taken out, and that the intervening space between the coal and the brickwork should be filled up with sand or some non-combustible material. The arch was to be 8 yards in length and 20 ft. high, and, as a further security against sparks, he proposed that a smaller arch about 30 ft. long should be built, and lengthened if necessary. He also suggested that the ashes should be taken out of the pit. Parker concurred in all the suggestions he made. On April 26 he met Pogmore and Parker at the office, and they all went down the pit together. When they got to the place where the engine and boiler were they found the pump at work. He was perfectly astonished to find that the boiler had not been bricked. He asked Parker how it was, at the same time telling him he had given directions to get it done. Parker said the water had got so high in the levels that he could not get the foundations in, and he thought it best to put up the engine and pump down the water, and then stop and make a good job of it. Witness replied that that was all very well, but in the meantime they would have the place on fire. Parker said, "Oh, dear no; nothing of the kind. The place is perfectly safe." Witness then went and examined the boiler, and saw that a small bit of brickwork had been put underneath, but the coal adjoining it had not been taken away. Witness called attention to it, and told Parker that he had not followed his directions in respect to that also. He then went round the place where the boiler was fixed to the entrance of the return air-course. There was a great deal of smoke escaping in a stream about 6 in. in depth, but the lower portion of the course was perfectly clear. He enquired of Parker if it had been examined, and the reply was that it had, and was all right. He went into the mouth of it, but did not go farther, because of the smoke. He felt the sides of the coal, and there was no heat of any consequence. Parker said he had taken out all the coal from above the boiler, and had placed an angle-pipe on the top of the boiler, which turned the smoke in the direction of the return. He did not perceive the least sign of fire or any sparks issuing from the engine or boiler. He discovered that the water was 30 or 40 ft. from the pump, and he

told Parker the water was quite low enough for him to get in the foundations, and advised him to stop the boiler and begin the work at once. Subsequently he went with Parker into another part of the workings, as he was told there was a smell of fire; but he could not find anything the matter. Afterwards witness again expressed disapproval at the brickwork not having been done, and Parker said he was going to do it. Witness then returned home. If he had been told on the 26th April that the coal was on fire, and had been from the 14th, he should not have left the pit until it had been put out. He had no doubt the fire could have been put out any time up to the time that it began to extend up the return air-way.

The DEFENDANT was cross-examined by Mr. MATTHEWS. He said that he had no right to order or prohibit any change—only the right of advising the change.—Mr. Matthews read an answer given by the defendant in 1882, at the inquest, to the effect that he had either the right of ordering any change or prohibiting it.—Cross-examination continued: That was in part correct. He could make an order, but not enforce it. He meant that he had not a dismissing power over the employees. His letters to Parker said nothing about brickwork being put in, because he had already given verbal instructions on the point. It was true that in the reports which he received on the work being done no mention was made of brickwork; and he could not say why, in replying upon those reports, he did not notice the omission. When he visited the colliery he relied upon Parker's assurance that there was no danger in the absence of brickwork. He had no reason then to mistrust Parker. He felt that the coal was warm. It was not "very warm indeed." Mr. Matthews read an answer at the inquest, in which the defendant said that the place was "hot—very warm indeed."

Cross-examined: He did find the coal very warm indeed, but not hot. It was true that under the Mines Act the return air passage ought to have been available for exit in the case of accident; but on April 26 that passage in the Baddesley Mine might have been cleared by stopping the engine for half an hour. On that occasion, however, he told Parker to stop working until brickwork should have been put in.

Referring again to the shorthand note of proceedings at the inquest, Mr. MATTHEWS sought to induce the defendant to acknowledge that he then said that when the engine had been worked without brickwork for 10 days he reluctantly consented to Parker's going on for a few days longer, trusting that no harm would arise.

DEFENDANT admitted that in a memorandum which he made in his notebook of the interview there was no record of his having told Parker to stop the engine. He presumed he must have consented to its going on. In his opinion the danger of spontaneous combustion was not increased by turning the return air-course into a flue, and letting out hot smoke and exhaust steam into it. The danger to be apprehended was from sparks, and these would not fly more than 10 yards higher than the funnel. He made no special examination of the arch in which the engine stood.

Mr. MATTHEWS: No. You chose to leave the matter to a foolhardy and disobedient man.

Re-examined by Mr. JELF: The coal in the upcast shaft was not more friable than coal ordinarily was. If he had had the slightest idea that the coal was on fire on the 26th of April he would not have consented to the engine going on for a single minute.

At this point Mr. J. S. Dugdale intervened to state that the defendant was not the representative of the trustees at the previous enquiries.

GEORGE CLEMENTSON GREENWELL, F.G.S., M.Inst. C.E., of Manchester, said that he had had 47 years' experience as a mining and mechanical engineer. His experience showed that a person who was not the certificated manager of a colliery, but only the consulting engineer, had no authority to do more than give advice. The position of consulting engineer was a well-known and defined position. Having heard the evidence he thought it was reasonably safe to place the boiler in the return air-course, with the contemplated brick arching, and with the limitation that the boiler was not to be worked more than eight hours a week. Unless there was something remarkably friable about the floor of the air-way nothing could cause spontaneous combustion. He had heard of no such friability in the present case. Until some time quite near to the occurrence of the explosion the fire might have been easily put out. It was not reasonably prudent to leave the colliery during the whole of Monday. The origin of the explosion was not, in his opinion, to be sought in the return air-shaft. He believed that a portion of the burning roof of the archway fell upon the floor.—Cross-examined: He had had no experience of the working of mines in the district of the Baddesley Mine. He knew something of Derbyshire and Leicestershire mines. Hot air and steam rendered spontaneous combustion more probable only in a large mass of small coal. But if he had found the state of things described as having existed on the 26th of April, he would have ordered the immediate extinction of the boiler fire. He would not have made an examination for himself had he been consulting engineer. He would have done exactly as Mr. Gillett did. It was the manager's duty to make examinations, and although he had known the manager to be negligent and foolhardy he would have left the manager to make them, his own duty being merely to consult.

Mr. MATTHEWS observed that the witness had retired from the exercise of his profession.

Mr. JOHN BROWN, F.G.S., M.Inst. C.E., and President of the South Staffordshire and East Worcestershire Society of Mining Engineers, agreed with the evidence of the previous witness as to the probable mode of generation of the fire, and corroborated him in other particulars.

This closed the case for the defendant. Mr. JELF and Mr. MATTHEWS having addressed the jury.

His LORDSHIP put the following points in summing up:—Was a breach of the defendant's duty to the plaintiff (1) to have allowed the boiler to be put down in the mine at all, either with or without brickwork; (2) not to have inspected the boiler between April 14 and 26; (3) not to have caused the working of the boiler to be stopped; and ought he to have caused an examination of the place to be made on the 26th of April? (4) if so, did the defendant neglect either duty? (5) Would the damages (not as to amount) sought to be recovered have occurred to the plaintiffs but for the breach of duty of the defendant? (6) Was the defendant misled by Parker on the 26th of April; and, if so, ought he under the circumstance not to have been misled? (7) Could Parker, by using reasonable care, have prevented the catastrophe, and was he guilty of negligence? (8) If Parker was guilty of negligence, could the defendant, by exercising reasonable care in performing his duty, have prevented the catastrophe?

The jury, after an hour and a half's absence from the Court, found as follows on the points submitted:—1, 2, and 3: Yes.—4: Yes; all.—5: No.—6: He was misled, and ought not to have been so misled.—7: Yes; to the 26th of April.—8: Yes.

His LORDSHIP said that was a verdict for the plaintiffs, and entered judgment for them, the amount of the damages to be settled by arbitration.

On the application of Mr. JELF execution was stayed.

In the High Court of Justice (Chancery Division) on Saturday, before Vice-Chancellor Bacon, an action in re Llyn Nantyglo Colliery Company (Limited) and Companies Acts was heard. This was a creditor's petition for winding up the company compulsorily.

Mr. RIBTON, who supported the petition, said the petitioning creditors were unsecured creditors to the extent of 1250l. The fact of the debt existing was, he thought, undisputed. It arose in this way. The petitioning creditors, the Llyn Colliery Company, sold to the Nantyglo Company land at the price of 9500l. A portion of that price, 4000l., was secured by mortgage, and the remaining portion, 5500l., was to be paid by instalments by the company. Some of those instalments had been paid, but one instalment amounting to 1250l. had not been paid. The petition was presented on the 28th of July last and on the 31st of July the company held a meeting, and passed an extraordinary resolution for winding up the company voluntarily. The only question now was whether his Lordship would take the winding up out of the hands of the shareholders, and put it into the hands of the creditors under a compulsory order. He thought

he would do so when he (the learned counsel) told him that the capital of the company consisted of 7400*l.*, made up of 74 shares of 100*l.* each, all fully paid up. The shareholders, therefore, had no further liability whatever. Then, again, the company was admittedly insolvent, as there was no chance of a surplus. Under these circumstances he asked for the usual compulsory order to wind up the company. The learned counsel read an affidavit by the managing director of the respondent company in support of his application.

The VICE-CHANCELLOR: This is not a case for compulsory order. The voluntary winding up must proceed under the supervision of the Court.

Mr. BUCKLEY (who appeared for the Nantylgo Company) said he had no objection to such an order being made.

The VICE-CHANCELLOR: I make no other order than what I have told you.

JURY AWARDS AT THE INVENTIONS EXHIBITION.

A supplement to the last *London Gazette* gives a list of jury awards to the exhibitors at the International Inventions Exhibition. It is explained that when more than one award is made to the same exhibitor, he will receive only one medal of each kind. The list gives the names of 487 exhibitors who have been awarded a silver medal, and 515 who have received a bronze medal.

Appended is a list of the exhibitors who have won the gold medal:—

Daniel Adamson and Co., "Wheelock" automatic cut-off engine; American Watch Company (U.S.A.), improvements in the machinery and processes employed in the manufacture of watches; Antoine Frères (France), improvements in keyless watches and general excellence of manufacture; Aqueous Works and Diamond Rock Boring Company, improvements in rock-boring apparatus; Austrian Manufacturing Arms (Austro-Hungary), complete exhibition of military rifles; Aveling and Porter, road locomotive with spring wheels; W. and T. Avery, improvements in weighing apparatus; Aylesbury Dairy Company (Limited), "Nielsen and Petersen" Danish cream separator and Fjord's fittings as applied to the testing of milk samples; Badische Anilin und Soda Fabrik, improvements in the manufacture of colouring matters and intermediate products from coal tar; H. J. Barrett, colonial transport and military wagon; Barrow Shipbuilding Company (Limited), group of models of ships; W. F. Batho, hydraulic dredger; Baume and Co. (Switzerland), excellence of manufacture of watches; R. and J. Beck, microscopic and other optical apparatus; John Bell and Co., treatment of asbestos; J. W. Benson, improvements in machine-made watches; Sir H. Bessemer, Bessemer iron and steel; Bickford, Smith, and Co., safety and instantaneous fuses; Bradbury and Co. (Limited), rotary shuttle sewing machine; G. Bray, combination water, dust, or elop van, and detaching polehead as used by fire brigade; T. Briggs, patent adjustable cart and noiseless automatic brake; Bristol Wagon Works Company (Limited), Margeson and Hek's patent tip van; British Alizarine Company (Limited), improvements in the manufacture of alizarine, &c.; British Gas Engine and Engineering Company (Limited), gas engines; British McKarski Improved Air Engine Company (Limited), compound air engines; Joseph W. Britton (U.S.A.), straightening and levelling machine for plates; Brooke, Simpson, and Spiller, improvements in the manufacture of coal tar colours; Samuel Brookes, improvements in weavers' frames and reels; Brunton and Trier, stone working machines; J. Buckton and Co., testing machine with autographic indicator; Burt, Boulton, and Haywood, Boulton's patent improvements in crosscutting timber; Cambridge Scientific Instrument Company, improvements in philosophical instruments; Sir A. C. Campbell, improved goniosat spectroscopy and speed indicator; Captain Cardew, volt-meter; J. Harrison Carter, roller milling machinery; M. Casson, Casson-Bichereux direct-acting gas furnaces; Government of China, general exhibit (and diploma); Chubb and Sons' Lock and Safe Company (Limited), locks and safes; Clark and Standfield, floating docks, hydraulic grid dock, and patent slip; J. P. Clebnikoff, Sons, and Co. (Russia), excellence of chased and enamelled gold and silver; Clift and Son, combination carriage; A. A. Common, celestial photographs; John Ward Cousins, highly ingenious surgical inventions; Coventry Machinist Company, cycles; R. E. Crompton and Co., improvements in electric lighting appliances; William Cooke, radiometers, &c.; Crossley Brothers, gas engines; Crypto Cycle Company, cryptodynamic gear; Cunard Steamship Company (Limited), transatlantic steamer *Etruria*; Dexter Curtis, patent zinc collar pad for the prevention and cure of horses' sore necks; Dalton Time-Lock Syndicate (Limited), time lock; Davey, Paxman, and Co., engines and boilers; De Grave, Short, and Co., improvements in balances, &c.; Denny Brothers, screw steamer *Arawa*; E. Dent and Co., improvements in turret clocks and chronometers; J. Dillon, patent hydrographic surveying and sounding apparatus; Doulton and Co., general exhibit of pottery, &c.; David J. Dunlop, combined steam and pneumatic governor for marine engines; East Ferry Road Engineering Works Company (Limited), Duckham's hydrostatic suspending weighing machine; Easton and Anderson, apparatus for water supply and purification; Edison and Swan United Electric Light Company Edison-Swan systems of electric lighting; Electric Power Storage Company, improvements in secondary batteries; Eley Brothers (Limited), general excellence of manufacture of ammunition; Ellington and Woodall, system for distributing hydraulic power in towns; J. H. Evans, ornamental turning lathes, counting apparatus, excellence and accuracy of workmanship and cheapness; Falcon Engine and Car Company; tramway, locomotive; James Farmer and Sons, machinery for the treatment of town refuse; W. O. Felt, Day's shading medium for lithographic and similar processes; Fielding and Platt, high-speed engine; Fielding and Platt, hydraulic machines for riveting, forging, and hanging; J. C. and J. Field, improvements in the manufacture of candles, &c.; Thomas Fletcher, gas fires and furnaces; Fleuss Breathing Dress and Safety Lamp Company (Limited), Fleuss breathing apparatus; Forder and Co., hansom cab; J. Fowler and Co., traction engines and an "undertype" compound engine; Samson Fox, corrugated furnace flues for steam boilers; Farnival and Co., Gill's hot or cold rolling machine; W. and J. Galloway and Sons, engines and boilers; Gardner Gun Company, machine gun; R. Garrett and Sons, portable compound agricultural engine, and "Garrett-Ellis" beater; Gaskell, Deacon, and Co., improvements in the manufacture of carbonate of soda, &c.; Gevelot and Co., and Gaupillat and Co., excellence of manufacture of ammunition; P. C. Gilchrist, basic or Thomas-Gilchrist process for making steel; Carlo Giuliano, artistic merit in jewellery; George Glover and Co., collective exhibit of gas apparatus; Glover, Walter, and Co., James's patent doubling and laying machine and rope-making machine; Goulard and Gibbs, successful working out of a system of distribution of electricity by induced currents; proprietors of the *Graphic*, improved printing machinery; Greenwood and Batley, high speed horizontal engine; Greenwood and Batley, machines for working metals and cutting twist drills; Paul Grünwaldt (Russia), furs; Hacking and Co., looms and folding, measuring, and winding machines; Hancock and Co., general excellence of jewellery and precious stones; James T. Hampton and Co., Scott's patent safety stirrup; T. R. Harding and Son, weavers' combs, card pins, &c.; James Hargreaves, improvements in manufacture of sulphate of soda; Harrild and Sons, letterpress and lithographic printing machines; Hartmann and Braun (Germany), perspectograph and interest calculating machine; Hathorn, Davey, and Co., domestic motor; Bathorn, Davey, and Co., differential gear for pumping engines, and improvements in valves for water-pressure engines; Thomas Hawkesley, instruments for assistance of the deaf; Henry Heath, hat making, hats, &c.; Heberlein Self-Acting Railway Brake Company, automatic friction brake; A. J. A. Heck, stability balance; Heenan and Froude "Tower" spherical engine; W. T. Henley's Telegraph Works Company (Limited), excellence of cables; Hick, Hargreaves, and Co., "Corliss" engine; J. J. Hicks, improvements in thermometers and other philosophical instruments; E. J. Hill, patent method of raising and lowering carriage windows; Hill and Clark, boat-lowering gear; A. Hilgear, improvements in philosophical instruments; Hillman, Herbert, and Cooper, cycles; T. H.

Brooke Hitching, baby carriages, disconnecting wheels, and general good workmanship in carriages; George Hodgson, improvements in power looms; Holland and Holland, various novelties in details and general excellence of workmanship in firearms; Holtzappel and Co., excellence of exhibit, good workmanship and accuracy, as evidenced by work done in lathes, &c., for turning, carving, &c., in wood and ivory; Hooper and Co., good workmanship, taste, and finish in carriages; R. Hornsby and Sons (Limited), string-binding "Appleby" reaping machine, and a finished threshing machine; Hotchkiss and Co., excellence in quick firing and revolver guns; J. and F. Howard, apparatus for trussing and binding straw as it issues from the threshing machine, and a string-binding "Appleby" reaping machine; Hulse and Co., machines for working metals; Humber and Co., cycles; Hunter and English, floating crane; Hydraulic Engineering Company (Limited), hydraulic engine, hydraulic balance direct-acting lift, and water-saving arrangements applied to hydraulic machinery; Indiarubber and Gutta Percha and Telegraph Works Company (Limited), indiarubber and gutta percha; W. J. Ingram, exhibit of printing machinery; Jadoffsky (Russia), cigarette machine; Government of Japan, general exhibit (and diploma); Kiritsu Kōshō Kwaisha, bronze vase; Professor Fleeming Jenkin, telephage; W. Jessop and Sons (Limited) crucible cast-steel stern frames, solid rudder, and cast-steel stern propeller brackets and blades; Jordan, Son, and Comans, complete exhibit of mining machinery; David Joy, valve gear; Kirkham, Hersey, and Clark, collective exhibit of gas apparatus; James Kite and Co., filter presses; Kitson and Co., Parson's high speed engine; Victor Kullberg, improvements and general excellence in the manufacture of marine chronometers; J. H. Ladd and Co., wood screw-making machinery; Laird Brothers, mail steamer *Ireland*; Charles Lancaster, excellence of workmanship and nicety of detail in guns and rifles; J. Lang and Son, general excellence of guns and rifles; J. A. Lawton and Co., patent oee-spring double perch Victoria phaeton; A. Légé and Co., tide predicting machine, combined recording tide-gauge anemometer and barometer, &c.; I. Levinstein and Co., improvements in the manufacture of coal tar colours; Litho Plate Company, patent litho plates; Luckhardt and Alten (Germany), improvements in scientific instruments; E. F. MacGeorge, clinograph for mapping the deviation of boreholes; McKenzie and Holland, railway signals, points and crossings; M'Naught and Co., general excellence in workmanship in carriages; Dr. Maddox, replacing collodion by gelatine in the emulsion process of photography; Manufacturing Goldsmiths' and Silversmiths' Company, general exhibit of jewellery and plate; H. B. Marsden, stone-breakers; Mather and Platt, sampling, bleaching, and washing machine; Maxim Gun Company (Limited), novelty and ingenuity of automatic firing arrangement; C. F. Millis, application of the principles of descriptive geometry to the cutting of sheet metal; Robert Mole and Sons, matchets, swords, &c.; Colonel Alexander Moncrieff, Moncrieff travelling siege carriage (manufactured by Easton and Anderson), and system of hydro-pneumatic gun-carriages; proprietors of Morgan's Lamp Patents, safety lamps; Morton and Thomson, ejector condenser; Nobel's Explosives Company (Limited), successful application, by Alfred Nobel, of nitro-glycerine to explosive purposes, as effected by detonation, and method of manufacture; T. Nordenfelt, method of casting wrought iron; T. Nordenfelt, excellence in machine and quick-firing guns; L. Oertling, excellence in balances, &c.; Achille Parise (France), locks; Patek, Philippe, and Co. (Switzerland), excellence of manufacture of watches; Patent Triangular Nail Company (Limited), patent triangular nails; Phosphor Bronze Company, phosphor bronze alloys; G. Planté (France), second battery and scientific research; Platinotype Company, excellence of results in photographic printing produced by W. Willis's invention; Henry Pooley and Son, platform weighing machines and self-indicating apparatus, polygraded steel-yard and automatic grain scale; Price's Patent Candle Company (Limited), improvements in the manufacture of candles, &c.; Pulsometer Engineering Company (Limited), pulsometer steam pump, Deane pump, and "Thames" filter; A. Ransome and Co., cast-making machinery and tree-felling machine; Ransome, Sims, and Jeffries (Limited), straw-burning engine and straw-chopping, bruising, and softening apparatus as applied to the steam threshing machine; John Rigby and Co., improved safety bolt and excellence of workmanship in guns; Ross and Co., progress and excellence of work in the manufacture of lenses since the early days of photography, also microscopic and other optical apparatus; G. Rung (Denmark), improvements in meteorological instruments; St. George's Engineering Company, bicycles; Saxby and Farmer, railway signals and safety appliances; B. J. Sayce, prominent share in the invention of the collodio-bromide process; Ernest Scott, Ashton's positive actioned power meter and continuous indicator; Shand, Mason, and Co., steam fire-engine and other appliances for use in extinguishing fires; Sharp, Stewart, and Co., planing machine and general excellence of exhibits; Prof. W. S. Hele Shaw, sphere and roller mechanism for transmission of power; ditto, improved integrators; Shepherd, Rothwell, and Hough, sewing and circular knitting machines; Government of Siam, general exhibit (and diploma); F. Siemens (Germany), tempered glass; Siemens, Brothers, and Co., excellence of electric lighting arrangements; H. T. Simon, Simon-Carvès coke ovens with continuous recuperation of heat and recovery of by-products; W. B. Simpson and Sons, decorated enamel iron and Anglo-Li-moges enamels; W. F. Stanley, improvements in philosophical instruments; L. Sterne and Co., gas engines; Stothert and Pitt (Limited); Wild's patent single chain-dredger; William Sugg and Co. (Limited), collective exhibit of gas apparatus; Surrey Machinist Company, cycles; J. W. Swan, incandescent lamps; J. W. Swan, part taken by him in the invention of carbon printing; W. R. Sykes, combined electric interlocking and blocking system for railways; Tangye Brothers, special steam pump, automatic condenser, and hydraulic jacks; T. Thomas and Sons, self-sustaining lifts and hoists, with automatic brake; Archibald Thomson, coupling for broken shafts; Thomson and Houston, systems of electric lighting (exhibited by Laing, Wharton, and Down); J. and G. Thomson, Transatlantic steamer *America*; Todd and Wright, Livingstone travelling car and improved patent dogcart; Troy Laundry Machinery Company (Limited), U.S.A., laundry machinery; Umpherson and Co. (Limited), patent rag engine for paper pulp; Vacuum Brake Co., vacuum automatic continuous brake, with universal coupling; S. A. Varley, designing the first self-exciting dynamo-machine; Venice and Murano Glass and Mosaic Co. (Limited), enamel mosaics; Ernst Wahliis, Austria-Hungary, pottery; W. Warde and Co., indiarubber; Waterlow and Sons (Limited), printing processes and machinery; Major H. Watkin, R.A., ingenuity in devising and applying practically scientific and accurate instruments to various military purposes, and the electric light for powder factories; Watson, Laidlaw, and Co., self-balancing centrifugal machine and hydro-extractor (Weston's patent), self-balancing electro-centrifugal machine and hydro-extractor (Watt's patent), also oil separator; J. Watts and Co., band sawing machine; Francis William Webb, exhibit of railway plant; Thomas Webb and Sons, general exhibit of glass, &c.; Westinghouse Brake Company (Limited), automatic air-brake and passenger communication for railway trains; White Star Line, transatlantic steamer *Britannic*; Whitehead, fish torpedo; Henry Wilde, discovery of the indefinite increase of the magnetic and electric forces from quantities indefinitely small; Willans and Robinson, Willans's compound engine and electric governor; W. E. Williamson, apparatus for registering fares; W. A. Wood, string-binding "Wood-Holmes" reaping machine and a grass mowing machine; W. B. Woodbury, the part taken by him in inventions in connection with permanent photographic printing; S. Worreham and Co., wood-working machinery; Worthington Pumping Engine Company, Worthington steam pumps; Alexander Wright and Co., collective exhibit of gas apparatus; Wycherley, Hewitt, and Co., improved machinery for the manufacture of watch movements; Yale and Towne Manufacturing Company (U.S.A.), locks; Charles R. Yandell and Co. (U.S.A.), embossed leather for chairs, screens, &c.; Young's Paraffin Light and Mineral Oil Company (Limited), improvements in the manufacture of products from shale, and in lamps for burning mineral oils; William Young and G. Beilby, improvements in the distillation of shale and coal.

We also give a list of diplomas of honour which have been accorded only to Government Departments and public institutions.

Admiralty, Lords Commissioners of, excellence of the exhibit, and more especially the fish torpedo invented by Whitehead, as now manufactured in the Royal Laboratory, Woolwich, to which department considerable credit is due for its present excellence; British Association Committee on Screw-gauges, standard screw gauges; British Carriage Manufacturers, Institute of, improvements in attempts to render parts of carriages interchangeable; British Horological Institute, collective exhibit showing progress in technical training, and illustrating high-class manufactures; International Automatic Engraving Corporation, Committee of, general printing and engraving exhibit; Agricultural Department, general exhibit; Education Department, Tokio, Professor Ewing's seismometers and other scientific instruments; Government Arsenal, general excellence of exhibit; Government Printing Offices, specimens of papers, bindings, and embossed wall papers; Public Works Department, general exhibit; Telegraph Department, excellent workmanship and design of electrical and telegraph instruments; Kew Committee of the Royal Society, system of testing watches; Committee testing apparatus, &c.; Physical Society of London, collective exhibit; Royal Meteorological Society, meteorological apparatus; Royal National Lifeboat Institution, improvement in life-boats; Royal Gunpowder Factory, Abel's system of pulping and compressing gun-cotton; Royal Carriage Department, general excellence of exhibit; Royal Gun Factories, general excellence of exhibit of guns and the high ingenuity displayed in their breech closing and sighting arrangements; Royal Laboratory, general excellence of manufacture; Royal Small Arms Factory, general excellence, especially in improvements connected with service rifles; particularly as regards the quick firer; Royal Engineers' Establishment, Chatham, (1) employment of cheap mirrors for the electric light, (2) application of the vibrator, (3) Cardew's voltmeter, (4) toughness and lightness of the material employed for military balloons and its capability of retaining hydrogen gas, (5) the use of tubes for the storage of hydrogen gas under high pressure for balloon inflation.

The following gold medals have been awarded by the Society of Arts on the recommendation of the juries, urging the claims of the exhibitors to special recognition:—

Sir Henry Bessemer, F.R.S., for the invention of Bessemer steel; Percy Gilchrist, for the Thomas-Gilchrist basic process of steel making; Hathorn, Davey, and Co., for their domestic motor (medal offered under the Howard trust); Samson Fox, for the invention of corrugated iron flues for steam boilers (medal offered under the Howard trust); Crossley Brothers, for the "Otto" gas engine (medal offered under the Howard trust); Ralph Tweddell, for his system of applying hydraulic power to the working of machine tools, and for the riveting and other machines which he has invented in connection with that system (medal offered under the Howard trust); Badische Anilin und Soda Fabrik, for their improvements in the manufacture of colouring matters and intermediate products from coal tar; William Crookes, F.R.S., for his improvements in apparatus for the production of high vacua, and for his invention of the radio-meter (medal offered under the Fothergill trust).

THE WHITWORTH SCHOLARSHIPS.			
Subjoined is the List of Candidates successful in the Competition for the Whitworth Scholarships, 1885:—			
Name.	Age.	Occupation.	Address.
Clarkson, Thomas.	20	Engineer	Manchester
Bennie, Hugh O.	20	Engineer	Glasgow
Unsworth, Robert H.	20	Engineer	Pendleton, near Manchester.
Martin, Harold M.	21	Engineer	Gateshead
Calderwood, William T.	25	Mechanical draughtsman	Glasgow
Richard, John	22	Blacksmith	Cardiff
Dobly, Ernest R.	23	Engineer	Leeds
Rorison, James	21	Engine fitter	Paisley
Moulton, Arthur J.	20	Engineer apprentice	Preston
McNeill, William	22	Mechanic	Birmingham
Moreton, George W.	24	Fitter	Crewe
Mallison, Stephen, E.	24	Assistant analyst	London
Smith, Henry C.	23	Engineer and millwright	London
Kenil, Robert	24	Engineer	Glasgow
Nash, Thomas W.	24	Engineer	London
Bursall, Henry F. W.	21	Engineer	London
Stopher, Arthur J.	22	Mechanical engineer	Nottingham
Wells, Sidney H.	19	Marine engine apprentice	London
Milnes, George	24	Fitter	Charlton, Kent
Begbie, Henry	22	Engineer	Old Charlton, Kent
Goodman, John	23	Engineer	Brighton
Crummie, Mark H.	21	Mechanical engineer	Hull
Marsh, Oliver	22	Fitter and turner	Crewe
Galbraith, Thomas	23	Pattern maker	Manchester
Bowles, Joseph H.	23	Engine fitter	Stafford

COMMERCIAL FAILURES.

The number of failures in England and Wales gazetted during the week ending Saturday, August 8, was 67. The number in the corresponding week of last year was 64, showing an increase of 3, being a net increase in 1885, to date, of 389.

The failures were distributed amongst the following trades, and, for comparison, we give the number in each in the corresponding weeks in 1883 and 1884:—

	1885.	1884.	1883.
Building trades.....	9	9	21
Chemists and druggists.....	—	—	3
Coal and mining trades.....	2	—	7
Corn, cattle, and seed trades.....	—	1	2
Drapery, silk, and woollen trades.....	4	4	20
Earthenware trades.....	—	2	1
Farmers.....	3	3	6
Furniture and upholstery trades.....	3	2	6
Grocery and provision trades.....	15	12	27
Hardware and metal trades.....	6	1	6
Iron and steel trades.....	—	4	4
Jewellery and fancy trades.....	4	2	7
Leather and coach trades.....	3	2	8
Merchants, brokers, and agents.....	7	6	14
Printing and stationery trades.....	1	1	3
Wine, spirit, and beer trades.....	5	7	19
Miscellaneous.....	5	8	23
Totals for England and Wales.....	67	64	177
Scotland.....	19	27	22
Ireland.....	3	11	—
Totals for United Kingdom.....	89	102	199

The number of Bills of Sale published in England and Wales for the week ending August 8 was 208. The number in the corresponding week of last year was 190, showing an increase of 18, being a net increase in 1885, to date, of 460. The number published in Ireland for the same week was 15. The number in the corresponding week of last year was 12, showing an increase of 3, being a net increase in 1885, to date, of 8.—*Kemp's Mercantile Gazette.*

of Dolcoath, was about to inspect East Blue Hills for the committee, and a copy of his report would be sent to every shareholder as soon as received. He inspected on Monday last, and his report was received on Thursday and at once placed in the printers' hands. Capt. Thomas is one of the most experienced as well as the most cautious of miners, and we are glad to find his report confirms those of the agents as to the value of the discovery. He says that at the 20 fm. level the lode has been driven upon 18 fms. in length, and all worth over 20¢ per cubic fathom. The lode in the shaft is equally favourable, and can be sunk, he says, at the rate of 3 fms. a month, so that "a considerable quantity of ore ground can be opened up in a short time." The whole of the stuff raised at the 20 has produced fully $\frac{1}{2}$ cwt. of tin to the ton of stuff. In regard to machinery there is not, he says, enough to make marketable the ore ground already laid open, and he recommends the erection of stamps capable of driving 48 heads, as "the lode is likely to produce considerable quantities of tin on being further explored."

In shares of home mines there has been less business doing. A new company

Westated some time ago that Capt. Josiah Thomas, the manager

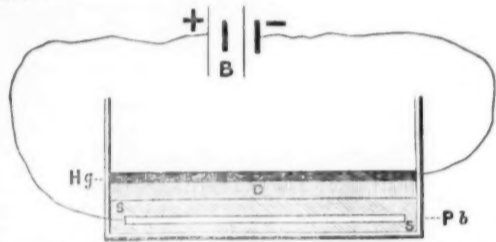
On Thursday notice was received from the employers in the manufactured iron trade in the North of England by the workmen's representative of a claim for reduction of 9d. per ton on puddling and 10 per cent. on all other forge and mill wages, to take effect not later than September 12 next. This claim will have to go before an arbitrator. The men have decided that they will not accept a sliding-scale at a lower minimum basis than the present rate of 1s. 6d. per ton for puddling wages.

HYDROGEN AMALGAM.

Under this title a new process has lately been perfected for the treatment of gold and silver, by which it is claimed that the quantity of the precious metals extracted from their ores will in all cases be increased, while the loss of mercury will be prevented, and the cost of extraction will be greatly diminished. Undoubtedly, any process which will effect this must be of great value to the mining interest. The efforts made in this direction are so numerous and varied that the task of close and full examination is not only important but necessary. For this reason we have delayed our examination till the process, the subject of this article, could be ascertained, not only from the scientific, but also from the point of view of practical working. The inventor of this process is Mr. BERNARD C. MOLLOY, M.F., S. Tel. E. and E., who is known as an authority upon this subject, and who has devoted several years to the question of the treatment of auriferous and argentiferous ores. Mr. Molloy lays down the following laws as the basis of any effective process:—

- 1.—That the "quickness" of the mercury must be always maintained, or, in other words, that the fluid metal should never be allowed to "sicken."
- 2.—That the body of the mercury should never be broken, even into two parts, much less into many, as in the grinding and similar processes.
- 3.—That all the products of the mill—crushed ore, float gold, and water—should pass through the body of the mercury.
- 4.—That each particle of the ore, float gold, &c., should each be rolled separately in the mercury to insure contact between the precious metals and the quick mercury.
- 5.—That this contact between the particles of the precious metals should continue for at least 10 seconds.

Under these conditions he claims that no mercury is lost, and that all the gold and silver brought into contact with the fluid metal will be saved. We see no reason to doubt the correctness of this claim. The process divides itself naturally into two parts—that which deals with No. 1 and that which deals with Nos. 2, 3, 4, and 5. We will take them in this order. By the kindness of Messrs. Browne and Wingrove, millers to the Bank of England, we were enabled to make our examination at their works. The quickening of the mercury is effected by electro-chemical or electrolytic action, carried out in a very simple fashion. By reference to the accompanying diagram the action will be easily understood.



Pb is lead anode, which is preferably constructed of the metal in the porous condition. SS is a layer of sand in which the anode is embedded, D is a porous diaphragm, Hg the amalgamating mercury constituting the cathode, and B is the battery or other source of electricity.

The porous diaphragm, D, upon which the mercury rests is constructed of any one of several porous materials which he has selected for the purpose, and which can be obtained in any district at little cost, and moulded and shaped by ordinary workmen. The sand, SS, upon which the diaphragm rests is saturated with a solution of, for example, a salt of soda ($\text{Na}_2\text{SO}_4 \cdot x\text{H}_2\text{O}$). The quantity used is very small, and will last for a long period. The mercury is connected by means of a wire with the negative pole of a voltaic battery, or other electromotor, while the lead anode, Pb, is similarly connected with the positive pole. A current of electricity of an electro-motive force, no higher than 4 volts, will be sufficient to obtain the required action. This electro-motive force will cause the evolution of hydrogen at the mercury cathode, and a portion of the alkaline metal—sodium—will also be separated. The mercury being thus charged with hydrogen and sodium, gives what is termed a "hydrogen sodium amalgam." Under these conditions the sickening of mercury becomes impossible, while, as a matter of fact, it assumes a greater vitality or "quickness" than in its natural state. Upon this point we may refer to some opinions of high authority. Prof. Crookes, F.R.S., has said on this subject:—"The extraction of gold by amalgamation has been attended hitherto with serious difficulties owing to the presence in the ore of sulphurets, arsenic, antimony, bismuth, or tellurium compounds, which coat the gold with a film of tarnish so that the mercury cannot touch it. Again, with many minerals the mercury is 'sickened' and its fluidity is destroyed, and it becomes a tenacious mass, or it assumes a powdery character. In each case its amalgamating action is almost destroyed. The result is in many cases that from 30 to 80 per cent. or more of the gold is lost in the tailings, whilst large quantities of mercury are also carried off in the washings. The following figures, extracted from official documents, show the percentage of gold constantly being lost at some of the most important gold mines in different parts of the world:—

In the Brazil generally the loss of gold is . . .	30 to 35 per cent.
" Piedmont	35 "
" Zell	35 to 40 "
" Hungary and the Tyrol	50 "
" Chili	66 "

In many cases the waste of mercury is even more serious than that of gold. . . . By the judicious admixture of a certain proportion of sodium, &c., with the mercury, its amalgamating power under all circumstances are preserved and intensified."

According to Dr. A. W. Hoffman, F.R.S., late professor in the Royal College of Chemistry—"The phenomena witnessed in comparative experiments, made with ordinary mercury, and with mercury to which a very small amount of sodium amalgam had been added, were truly startling."

Prof. Robert Hunt, F.R.S., writing of his experiences in the Quarterly Journal of Science, stated that:—"By the judicious admixture of a certain proportion of sodium with the mercury its amalgamating powers are, under all circumstances, preserved and intensified." It will be seen from these authorities out of many how vastly important this application of a well-recognized chemical action is to those engaged in gold and silver amalgamation. In the adaptation of this scientific fact by Mr. Molloy, this valuable admixture of sodium and hydrogen is continuously, evenly, and in any desired quantity passed, in the most simple method, and at practically no cost, into the mercury in use. Even the admixture of oil under these conditions with the mercury has no evil effect. More than this, the mercury appears to have an additional vitality infused into it; for mercury already sickened is at once rendered bright, fluid, and quick. If ordinary mercury be brought into contact with chloride of silver there is no action, but acted upon as above described the silver contained in the chloride will be at once amalgamated. In the experiments we witnessed under the process of Mr. Molloy, the action of the sodium upon the mercury was most effective in

"quickening" the mercury and the deoxidising of the sickened mercury. The action is immediate and absolutely under control. The mercury, as shown under these conditions, rapidly absorbs silver coated with oxide, or burnt silver. This portion of the invention can be applied to all existing amalgamating machinery, although Mr. Molloy has devised a special form of apparatus, which we will now describe.

The second part of the process covers Nos. 2, 3, 4, and 5. The accompanying diagram shows section of the machines in use. The one examined is shown in Fig. 2. In size it may be described as 2 ft. 6 in. by 3 ft., and could easily be carried on a man's back.

FIG. 1.

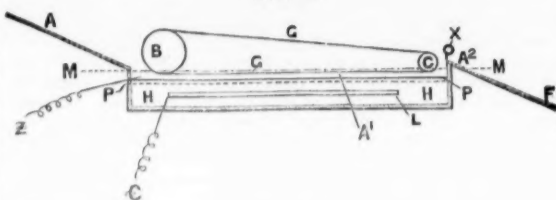
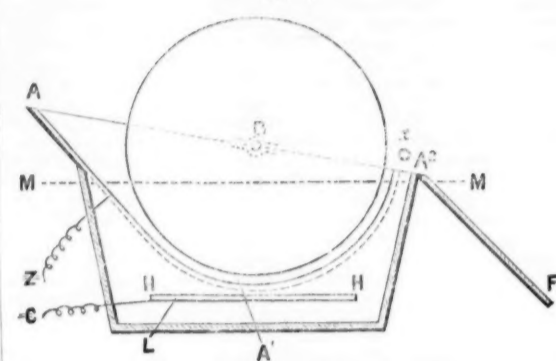


FIG. 2.



A A' A' Fig. No. 1 is a box shaped, say, as shown in the drawing. It may be made of any convenient dimensions and constructed of wood or other suitable material preferably though not necessarily saturated or coated with a waterproofing material such as paraffin wax, shellac, marine glue, &c. The portion of the box marked A is open at the top, and is so shaped as to form a sloping table down which the stream of ore to be treated runs to the drum B, and the other end of the box may conveniently follow the outline shown in the drawing figure No. 1. The shallow central portion of the box marked A' is closed by means of a diaphragm P, upon which rests the mercury as hereinafter described. The third portion of the box marked A' forms a bridge over which the ore passes away as hereinafter more fully described.

B is a drum working on a spindle, as shown and revolved by any convenient means. C is a drum G. G is an endless band of linen nearly as wide as the inside of A A' A', and passes round the two drums B and C, the drums B and C pressing down slightly into the mercury so that the band everywhere presses upon the surface of the mercury.

The bottom of the box A A' A' is closed with the porous diaphragm. H. H. is a trough made of wood, and it is fitted with a lead anode, having an electrical connection. This trough H H may or may not be a structure separated from the box A A' A'. Its size if separated will be slightly larger than the box A A' A'. This trough containing sufficient of the aqueous electrolyte is when separate supported by any simple method underneath the box A A' A', but so that the surface of the aqueous electrolyte shall be in all cases in contact with the under surface of the porous diaphragm of the apparatus. Where the leather for instance is used then the box H H may be the same size as and fitting to the bottom of A A' A' the diaphragm intervening, and the two boxes being clamped together tightly.

The box A A' A' is filled to the depth of, say, 1/2 in. with mercury, and which thus rests upon or against the diaphragm, but so that the bridge at A' is slightly higher than the level of the mercury. This body of mercury has an electrical connection which may be formed by a wire resting in the mercury and passing through the substance of the box at any convenient point. The mercury here will constitute the cathode and is connected by means of the wire with the zinc or negative pole of the voltaic battery of two or more couples in series, or with the negative pole of any other electro motor such as a dynamo-machine while the anode in the trough H is connected with the positive pole of the same electro motor.

When the apparatus is in action, for example, with a solution of caustic soda, an electro-motive force, which in ordinary cases need be no higher than 4 volts is used. This electro-motive force will cause the evolution of hydrogen at the cathode (such evolved hydrogen being the excess of the quantity required to form hydrogen amalgam), and a small proportion of the alkaline metal sodium will also be separated. An amalgam of sodium and mercury containing but a small proportion of the former metal would when used as a positive element in conjunction with a carbon negative and an aqueous electrolyte give an opposing electro-motive force of less than 3 volts, such an amalgam could, therefore, as is well understood be obtained by means of an electro-motive force of 4 volts. The electrical resistance in the circuit constituted by the apparatus being very small electrical power is not wasted. He does not limit himself to any definite electro-motive force, but in every case it must be greater than the counter electro-motive force generated within the apparatus itself. The apparatus being thus so far arranged, and the electrical connections duly made then the current of electricity will pass from the anode in trough H through the aqueous electrolyte to the mercury cathode, and produce the desired hydrogen sodium amalgam at the expense of the hydrogen resulting from the decomposition of the electrolyte, the oxygen being retained or evolved at the anode. The space between the face of the drum and the diaphragm in Fig. 2, the one used on this occasion, was filled with mercury up to the level indicated by line M to M.

The slimes (i.e., the crushed ore and water) are passed into the box at A and the drum is slowly revolved. The endless band passing through the body of the slimes carries it on its face a thin layer of the ore and rolls it on the surface of the mercury by the pressure of the band or face of the drum and by the rolling action separates and rolls separately each particle of the crushed ore. Arrived at the exit of the band from the mercury the ore floats to the surface, where it is played upon by a fine spray or jets of water which shoots out from the tube x. The tube x is of course in connection with a supply of water, and is pierced with a number of small holes. This agitation of the ore by the water at the point of exit disentangles the particles of ore from the mercury, and enables it to float away without disturbing the mercury, and so avoids the otherwise mechanical flouing. The difference in the specific gravity of the ore and the mercury

makes the separation of the ore and the mercury and the carrying away of the former easy under the conditions named. The ore passes away over the bridge formed by the end side of the box at A' and down away through the trough F. By these means the particles of gold or ore carrying gold and all float gold will be brought into intimate contact with and rolled in the body of the mercury maintained in a "quick" or "unsickened" condition. The ore so discharged will have thus passed through, and been rolled over and against a considerable quantity or surface of mercury by which a prolonged contact between the mercury and the ore will have been secured, and the duration of contact may readily be varied from 10 to 30 seconds or longer. Another form of the foregoing arrangement of apparatus acting under the same conditions and upon the same principle will be found in Fig. 2. Here the face of the drum serves the purpose of the face of the endless band, and the porous diaphragm follows the outline of the periphery of the drum B, leaving a space of (say) 1/2 in. between the face of the drum and the upper surface of the porous diaphragm to be closed with mercury. The trough H H in either case may be filled with sand saturated with the electrolyte—the sand thus forming a flat bed or support for the diaphragm carrying the mercury. To prevent escape along the sides of the drum or band and over the level of the mercury narrow strips of (say) indiarubber are fixed to the sides of the machine dipping into the mercury, and pressing upon the edges of the roller or drum, and so prevent any ore escaping through the amalgamator except through the mercury and by the action of the band or drum.

Having explained the action of the apparatus as it is intended to work, we may now describe it as we saw it in action. The ore used was some red oxide ore of a pasty character from the Transvaal. The ore having been mixed with water as it would come from the mill was poured down the inclined plane, A, of the machine shown in the apparatus used upon this occasion—Fig. 2. The drum was then revolved slowly at a speed of about one revolution in 10 seconds. A thin layer of the ore was then pinched in, so to speak, between the face of the drum and the mercury. The spindle of the drum, it should be mentioned, was locked down in the bearings to prevent the drum floating. The action of the revolving drum, therefore, was under this pressure, to roll out the particles of the ore in the body of the mercury, and due to the pressure, to break up any lumps, and spread the particles out so as to immerse each particle of ore separately in the fluid metal. The speed of the drum owing to this rolling of the ore is about three times as great as the latter. The ore on arriving at the surface of the mercury A' was rolled over and washed by the jet of water from the tube x, and so completely freed from the mercury. The ore thus treated toppled over the bridge at A', and passed away to the slimes.

The flow of the ore at the point of exit over the bridge at A' was even and continuous so long as the supply of ore was kept up, and was absolutely free from any particles of mercury. The cost of working this apparatus has been estimated by two eminent mining engineers not to exceed 3d. per ton, and it is difficult to suppose that it can exceed that figure. The apparatus is simplicity itself, and of a most inexpensive character. That used on this occasion, as above stated, with a tested capacity of 2 1/2 tons per day, costs no more than 5l. or 6l. complete and ready for use. That Mr. Molloy has succeeded in fulfilling the five conditions named in the beginning of this article must be admitted. Such a process means an increased get of gold and silver in all cases, and in many mines the difference between a loss and a profit. If mercury kept in a constant state of quickness, and if a long continued contact of each particle of ore and float gold between it and the quickened mercury, without any loss of this latter be a gain to the mining world, as we believe it is, then Mr. Molloy must be congratulated on a very big success in a struggle where so many have tried for the prize.

QUEENSLAND GOLD MINING.

CHARTERS TOWERS.—For the month of May the Warden's reports to the Government are satisfactory, and the output of gold showing the usual good results. The quantity of stone passed through the stampers was 5224 tons 13 cwt. 2 qrs., and the yield of gold therefrom 10,426 ozs. 13 dwts. 12 grs., or an average of 2 ozs. per ton (less 8 grs.). The northern and eastern extension of the Queen line has been lately the principal point of attraction, and the results obtained justify the expenditure of the capital on sinking in the blocks, and also on the line between the Queen Reef and the Sumburst. The Day Dawn P. C. Mine keeps 30 heads of stampers fully employed day and night, and the Day Dawn and Wyndham will shortly be in a position to raise quartz from three shafts, when the output of the latter will, no doubt, equal that of the former, whose last month's crushing was 1530 tons, yielding 2987 ozs. 5 dwts. of gold. Among the good crushings of the month was one from the Dan O'Connell; 360 taken from the 1000 ft. level, which yielded 927 ozs. of gold, showing the sterling good qualities of the reef at that depth.

THE PALMER.—In this district the want of rain has been a serious drawback to mining operations, as most of the miners have had to suspend operations of washing and crushing.

RAVENSWOOD.—The activity formerly reported in this field continues with the natural result of an increase of population.

Residence areas and mining claims are being rapidly taken up by miners and others who purpose settling down there. Knowing the richness of the reefs below the water level, and believing in the ultimate future of the field, when by smelting or otherwise the gold can be separated from its base compounds, the miners are retaking up holdings on which good payable gold was found in the early days of the fields history, but abandoned when the mundic was struck. Work is being prosecuted rapidly in many of the mines, and large paddocks of quartz are being got together awaiting the early completion of the smelting-works.

In the Black Jack leases the air-compressor and rock-drill have been tested with satisfactory results. Holes 4 ft. deep in extremely hard rock can be drilled in 10 minutes. The silver lodes opened in the Sellham district the several shafts continue of fair average thickness, the formation being about 3 1/2 ft., whilst the clean ore is about 14 in. Bunches are, however, frequently met with, thereby increasing the average thickness: 70 tons of hand-dressed ore have been shipped from the Pyramid lease of a value of about 20l. per ton. This field's produce for the month was—gold, 3730l. 1s. 3d.; silver, 2165l. 1s. 8d.; total, 5894l. 2s. 11d.

MULGRAVE.—Good prospects are reported from the Lower Mulgrave, where there are many quartz reefs carrying good gold, and when suitable machinery can be supplied, with the best appliances for saving the fine gold and treating the pyrites, the mines will furnish good returns. Several reefs opened thus have yielded under difficulties from 1 to 3 ozs. to the ton, and from the extent and size of reefs the district must ere long become one of the busy mining centres of Queensland.

HOLLOWAY'S OINTMENT AND PILLS—COUGHS, INFLUENZA.—The soothing properties of these remedies render them well worthy of trial in all diseases of the respiratory organs. In common colds and influenza the pills, taken internally, and the ointment rubbed over the chest and throat, are exceedingly efficacious. When influenza is epidemic, this treatment is the easiest, safest, and surest. Holloway's pills purify the blood, remove all obstacles to its free circulation through the lungs, relieve the over-gorged air tubes, and render respiration free, without reducing the strength, irritating the nerves, or depressing the spirits; such are the ready means of escaping from suffering when afflicted with colds, coughs, bronchitis, and other chest complaints, by which the health of so many is seriously and permanently injured in most countries.

IRON STATISTICS.

Mr. J. S. JEANS, Secretary of the British Iron Trade Association, forwards the following statistics:—

PIG-IRON PRODUCTION IN 1885.

No. I.—Make of Pig-iron in the United Kingdom for the half-year ended June 30, 1885, compared with that of corresponding half of 1884.

TOTAL PRODUCTION OF PIG-IRON.

District.	First half of 1885.	First half of 1884.	Increase in 1885.	Decrease in 1885.
Cleveland	1,217,350	1,280,754	—	63,404
Scotland	483,600	527,044	—	43,444
West Cumberland	370,754	443,874	—	73,120
Lancashire	365,420	368,706	—	3,286
South Wales and Monmouthshire	383,547	450,633	—	67,086
Derbyshire	179,771	156,317	23,454	—
South Staffordshire & Worcestershire	183,940	185,065	—	1,125
North Staffordshire	159,132	128,181	30,951	—
West and South Yorkshire	117,345	132,910	—	15,565
Lincolnshire	139,704	123,952	15,752	—
Northamptonshire	104,712	134,721	—	30,009
Shropshire	20,713	23,000	—	2,287
North Wales	22,500	10,463	12,037	—
Notts, Leicestershire, &c.	58,607	25,600	33,007	—
Totals	3,807,095	3,991,220	—	—

Net decrease of make in 1885, 184,125 tons.

No. II.—Quantities of Forge, Foundry, Hematite, and Spiegel Iron respectively made in the United Kingdom during the half-year ended 30th of June, 1885, as far as returns of the same have been received by this Association.

Returned production during the half-year ended June 30th, 1885, of

District.	Forge Tons.	Foundry Tons.	Bessemer Hematite Tons.	Spiegel Iron and Ferro-manganese Tons.
Cleveland	—	—	341,525	—
West Cumberland	52,710	1,635	234,432	12,216
Lancashire	10,570	11,533	285,696	15,592
South Wales	61,110	7,090	226,702	10,834
Derbyshire	22,231	16,360	—	—
North Staffordshire	73,313	4,663	—	—
South Staffordshire, &c.	100,181	52,089	259	—
West and South Yorkshire	59,464	38,638	—	—
Lincolnshire	71,149	46,722	—	—
Northamptonshire	78,039	25,733	—	—
Shropshire	17,633	80	—	—
North Wales	2,530	—	—	14,100
Notts, Leicestershire, &c.	42,927	10,680	—	—

* As there is only one Cleveland firm engaged in the manufacture of Spiegel-iron, the make of that firm is placed under the head of Bessemer hematite. Returns of the production of Cleveland iron have not been specially collected by this Association, and the statistics collected by the Cleveland Ironmasters' Association do not distinguish the several proportions of forge and foundry iron produced.

No. III.—Stocks of Pig-iron held by makers and in Warrant Stores in the United Kingdom at 30th June, 1885, compared with those at 30th June, 1884.

District.	Total stocks of pig-iron at June 30, 1885.	at June 30, 1884.	Increase at June 30, 1885.	Decrease at June 30, 1885.
Cleveland	406,125	269,899	136,226	—
Scotland	601,479*	589,132*	12,347	—
West Cumberland	126,310	112,600	13,710	—
Lancashire	142,986	139,920	3,066	—
South Wales	82,943	62,930	20,013	—
South Staffordshire	23,950	46,211	—	22,261
Worcestershire	19,486	15,937	3,549	—
North Staffordshire	74,836	67,350	7,486	—
Derbyshire	34,104	26,185	7,919	—
South and West Yorkshire	70,834	52,854	17,980	—
Northamptonshire	22,100	21,200	900	—
Lincolnshire	28,748	10,400	18,348	—
Shropshire	12,818	15,075	—	2,257
North Wales	4,430	2,400	2,030	—
Notts, Leicester, &c.	17,580	3,250	14,330	—
Total	1,668,729	1,425,343	—	—

Net increase of stocks during the half-year, 243,386 tons.

* Pig-iron in Connal's Stores only. At the end of 1884 there was an additional 241,577 tons stored in makers' yards.

The stock of pig-iron* on December 31, 1884, was 1,567,890 tons. The production of pig-iron during the first half of 1885 was 3,907,095 tons.

Total

Deduct stock* at June 30, 1885.....

Total consumption of pig-iron to 30th June, 1885.....

Against a consumption to 30th June, 1884, of

Decrease

* Makers' stocks in Scotland not included, being unknown at 30th June.

Production of Bessemer Steel Ingots in the United Kingdom during the half-year ending the 30th June, 1885, compared with that for the corresponding half of the previous year.

District.	Half-year ending June 30, 1885.	Half-year ending June 30, 1884.	Difference in 1885.
South Wales and Monmouth	191,581	221,316	— 29,735
North-East Coast	145,718	164,475	— 18,757
Lancashire, Cheshire, &c.	88,917	81,141	+ 7,776
West Cumberland	93,056	88,851	+ 4,205
Sheffield district	104,500	82,060	+ 22,440

Totals

Production of Bessemer Steel Rails in the United Kingdom during the half-year ending June 30, 1885, compared with that of corresponding period of 1884.

District.	Half-year ending June 30, 1885.	Half-year ending June 30, 1884.	Increase or decrease in 1885.
South Wales and Monmouth	109,124	182,271	— 73,147
North-East Coast	70,502	105,326	— 34,824
Lancashire, Cheshire, &c.	41,845	45,127	— 3,282
West Cumberland	67,830	68,328	— 498
Sheffield district	44,396	25,363	+ 19,033

Totals

Production of Bessemer Steel Blooms, Billets, Plates, Angles, &c., during the first half of 1885, as far as returns have been received.

District.	Plates Tons.	Angles Tons.	Bars Tons.	Billets for sale Tons.	Billets for Cast-ings Tons.	Forgings Tons.
So. Wales & Monmouth	1,146	—	1621	6,395	271	—
North-East Coast	7,866	—	—	68,519	7,941	34
Lancashire, Cheshire, &c.	1,655	201	—	3,250	28,889	86
West Cumberland	3,186	—	—	—	1,187	77
Sheffield district	11,388	—	—	7,500	7,913	—

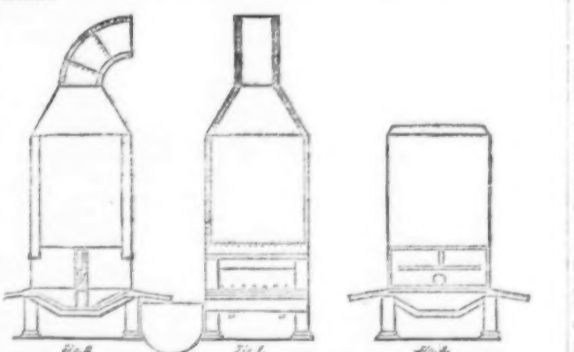
Totals

LEAD SMELTING—A NEW AND IMPORTANT PROCESS.

The Bristol Sublimed Lead Company (Limited) are putting up large lead smelting works at Arrowsmith, near Bristol, to work the Lewis-Bartlett patents for melting lead without any escape of fume, and for the manufacture of white lead direct from the ore. The invention appears to be a very valuable one, and among the special advantages may be enumerated the saving of all waste in smelting lead ore, with great economy in labour and fuel. The production of a superior quality of white lead at a very low cost, and the prevention of lead fumes so injurious to surrounding neighbourhoods. This latter advantage is in itself of such importance not only to lead smelters generally, but to the employees and the dwellers within the vicinity of lead works, that we can but think a description of the process as now in operation at the Lone Elm Works, Joplin, Jasper County, Mo., U.S.A., will be interesting to our readers, since it illustrates one solution of the old problem, that of saving and utilising the "waste fumes" in lead smelting. The accompanying illustrations will materially aid the description of this new process. The Lone Elm Works, where this process has been successfully tried, consist of two departments—the ore smelting department and the slag smelting department, each with its fume-collecting apparatus. In the former, about 55 per cent. of the metal is obtained in the form of pig-lead, and the remainder is collected in the fumes from the "blue smoke" building, or remains in the slag. In the latter, these two intermediate products are treated, and an additional yield of lead is obtained. The fumes from the second smelting are in the form of a marketable pigment. The arrangement of the works may be understood from the accompanying cut. The long building in the upper left-hand corner is the ore smelting furnace-house. From it a pipe leads to the exhaust fan in the engine-house, and thence another pipe goes to the double gabled blue smoke buildings, on the right of the picture. The slag smelting-house is between the engine-house and the furnace building. From it a pipe composed in part of inverted V's or goose-necks leads through a second exhaust fan, and a reach of pipe beyond into the paint building, in the upper part of the picture.

The furnace, which is called "the Jumbo Furnace," is here shown in three views (1, 2, and 3). As will be seen, it is an ingenious modification of the Scotch hearth, and resembles four ordinary American hearths set close together, and is worked from two opposite sides, which are called fronts. A single water-back, which contains the tuyeres, answers for both fronts; the bottom of the water-back is on a level with the top of the lead-bath in the smelting-basin; it rests directly on a dam of cast-iron, which reaches to the bottom of the basin, except at one corner, where it is cut away to allow all the metal to be drawn off from one side. This dam being constantly submerged in the bath, and protected from the cutting action of the flames, is not cooled either by water or air, and being hollow and open on the bottom, is constantly filled with molten lead. This furnishes a solid foundation for the water-back, and prevents oscillation in the bath produced by working the charge on one front of the furnace from being transmitted to the other front. An air box rests on the water-back, which is divided by a vertical partition to separate the air passing to one front of the furnace from that which goes to the other. The blast, before reaching the air box, is made to pass through the "jamb" or side walls of the hearth. The air from one jamb all goes to one compartment of the air box, and from the other joint into the opposite one. The jamps being so arranged that by means of an horizontal partition the air has to pass the whole length of them before reaching the air box. By means of 14 copper tuyeres, 1½ in. diameter, the heated air from the air box passes through the water back into the hearth. These pipes are so set that the seven start from one side of the centre line of the air box lead into the opposite hearth, into which, however, they do not project, but are beaded into countersunk sockets in the side of the water-back. The cold water is admitted to the water-back at one end near the bottom by a pipe that passes inside of the blast-pipe and through the jamb. The basin is only 8 in. deep, and the lead running out of the overflow is drawn from the bottom of the bath through a tapping-pipe that reaches nearly to the bottom of the basin. The lead as smelted flows into a refining kettle, and undergoes the process of boiling, which is done by holding a small block of green wood down at the bottom of the kettle by a mechanical contrivance, thus doing away with "poling" by hand. When the boiling is completed the dross is removed, and the lead run out from the bottom, and cast into pigs.

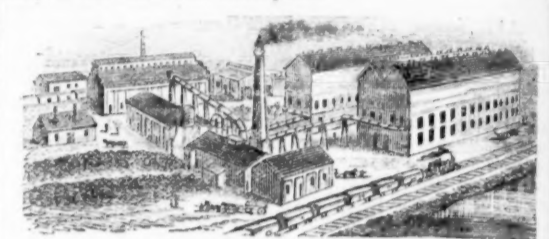
The furnace stands clear from the floor on four iron pillars, and having an open space all round it the men are not exposed to the heat reflected from a mass of masonry, therefore the work of smelting is not so severe as in the older methods. Starting 15 in. above the level of the bath is a rectangular hood, equal in length and breadth to the two hearths which rises 7 ft. before it is turned into the horizontal flue. With the furnace running steadily two men on each side, or four men to the furnace, will smelt nearly or about 1 ton per hour. From an economical point of view in labour and fuel, as also for the health of the men employed, the process seems a great improvement over the older types of furnace.



The lead fume chamber, as used at the Lone Elm Works, from the head of this furnace, the fumes are drawn through an overhead pipe by a suction fan, this pipe being 5 ft. in diameter and 350 ft. long, and passed into the blue paint buildings which are constructed of brick and iron. The columns, beams, joists, scaffold frames, tie rods are all of wrought-iron pipe of appropriate diameters. The windows and door frames and footways of iron. These buildings are separated only by a wall, are about 100 ft. long, and together 65 ft. wide, divided into two storeys. The lower in each is occupied by two rows of hopper-shaped bins connected together at the top, each row extending the length of the building. The shape of these hoppers is that of an inverted frustum of a four-sided pyramid. The four corners of the smaller base rest on columns of iron pipe, which support the hopper about 3 ft. above the floor. The base is formed by a sliding damper. The hoppers are all covered by an iron top, pierced at intervals by circular openings, through which iron thimbles, 20 in. in diameter, project upwards. To each end of these thimbles is tied the lower end of a woollen bag, from 30 to

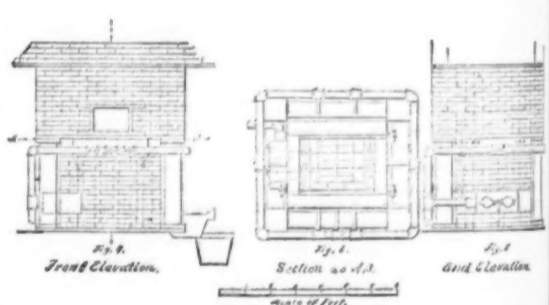
40 ft. long. These bags are suspended from points near the roof, and hang vertically. Iron scaffolds and footways between two rows of bags at convenient heights, give access to all parts of the buildings. The cooled furnace gases are pushed along by the force of the fan, and are admitted into one end of each of the rows of connected hoppers, and from the hoppers they rise, filling the bags above. The pressure is just sufficient to keep the bags distended. The gases pass readily through the mesh of the fabric, but even the most minute particles of fume are arrested by it. Twice in 24 hours the blast is shut off, and men wearing aspirators pass quickly through the building, giving to each pair of bags as they pass a sharp shake, which detaches the coating of fume from the bag, and lets it fall into the bin below.

At this stage of the process, an ingenious device is made use of. The lower floor of the blue smoke buildings is paved with brick, and the iron pillars that support the tanks are encased in fire-brick pipes. The lighter portions of the fume are as fine as soot, and almost as liable to blow away; but after being let down from the hoppers and spread over the floors, the fume is set on fire, and the fire, once started, spreads through it without flaming, but giving out a good deal of heat and quite perceptible sulphurous acid fumes. This burning leaves the fume in the form of a porous, friable, dirty-white crust, which, however, will stand considerable handling without falling to powder; and even when fine it is very different from the fume in its original state, and much better adapted for the second part of the process, its conversion into white paint.



THE SLAG-EYE FURNACE.

This second operation takes place in a furnace called the Slag-eye, as shown in figures 4, 5, and 6. It is simply a square shaft of brick of 2 ft. cross section inside, provided with a water-cooled tuyere box, set on a level with the bottom of the furnace, through which two tuyeres pass entirely, and from water-cooled tuyere boxes which completely encircle the furnace on a level with the bottom of the charging door. These upper tuyere boxes are pierced for seven 1½ in. tuyeres. The blast-pipes are provided with sight-holes, and do not project into the furnace. There are three of these furnaces, and they stand in a line down the centre of a furnace room 70 ft. long and 35 ft. wide. They are about 15 ft. apart, and directly over them and bridging the space between them, runs the conduit leading to the cooling pipes and fan. The charging doors are on the side, and the tuyeres and tapping hole are directly under the flue. A short iron hood connects with the ventilation of the building, which projects about 1 ft. from the flue and extends the length of it, which carries off the smoke, steam, and heat from the furnace-room. These furnaces have a clear space around them, like the Jumbo furnace, and for the same reason. To this furnace are brought the grey slag from the first furnace, and the burned blue paint, and those two are mixed as in the common slag-eye with a proportion of coke. The nine tuyeres using hot air, and arranged at the bottom and all round the top, give every opportunity for the complete oxidation of everything that is volatilised, and bring the heat into the centre of the furnace without depending on the troublesome slag nozzle so necessary in the tuyere slag-eye. When in operation the flow of lead and cinder is continuous. The lead rises into a casting basin on the side, and the cinder flowing over a bath of lead falls into a pit of water.



The blast for the Jumbo furnace and for the slag-eyes is produced by separate blowers. The blast for the latter is heated by being carried some distance inside the white fume conduit. Between the slag eyes and the white lead building the fume is forced to pass through several hundred feet of cooling pipe. The construction of the white building is very similar to that of the blue buildings. The hoppers are, however, of wood lined with iron, and discharge into wooden bins that stand under them. Before the slides are open, a loose flap of canvas, held in place by a heavy curtain stick, is dropped down over the front edge of the bin, and covers the open top, and the escape of dust is thus prevented. The gases containing the sublimed lead paint pass into the hoppers and escape through the mesh of the bags, which are hung like those in the blue room, and the white-lead is shaken down in the way described.

There can be no doubt, from this description of the Lewis-Bartlett process for the collecting and utilising the fumes from smelting and wasting furnaces, that it will prove itself of great value to the future profitable working of lead mines; and the invention is one, from its simplicity and effectiveness, must commend itself to all interested. When we consider that the process is one by which the gases are drawn from the furnace with a fan, cooling them in metallic cooling-tubes, and straining them at feeble pressure through the meshes of a woven bag, it may be deemed superior to any method ever adopted.

Mr. P. Bosworth-Smith, the newly-appointed Government Mineralogist at Madras, after inspecting the mineral collection in the Madras Museum, is of opinion that it is by no means a perfect index to the natural wealth of the Presidency. The iron specimens he considered the best, and the copper specimens as interesting from a scientific point of view, but too few in number. He expressed his surprise at the few specimens of lead which are collected, considering the many deposits of lead that occur in the Presidency. He suggested that sections of the many fine marbles and limestones, as well as the igneous rocks used for building purposes, should be studied microscopically in order to test their durability, and that the collection of standard minerals from foreign countries require rearrangement, and in some instances to be renamed, as the wrong names had been given.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA—No. XV.

BY THOMAS COLLINGWOOD KITTO, M.R.

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The Mining Board expenditure for removing the reef in the Kimberley Mine in 1878 was 100,000l. In 1879 it was over 150,000l. In that same year I wrote to the Government saying, "If the expenditure for the next ten years increase at the same ratio it will be such a strain on the resources of the mine that nothing but a veritable El Dorado could stand it. But if a company such as I recommend be afforded every facility for working according to their own plans on the most approved principles they would, according to my estimate, complete the work in about three years, to the satisfaction of the proprietors of the mine, for the sum of 800,000l. This at first sight may appear a large figure to many, but it is a mere bagatelle compared to the large figure to what it is likely to cost if some such scheme as I have recommended be not adopted." Immediately after this statement of mine appeared great efforts were made on the part of the Mining Board and their engineers to prove that it would not take half the amount stated by me to properly secure the Kimberley Mine. A committee was formed, called "The Committee of the Reef Tariff," and on the 26th of August, 1879, they presented their report. Their report showed that the whole mine could be made secure for a total expenditure of 352,563l. These were the figures of the engineers of the Board, which caused a very favourable impression amongst those who were anxious to get favourable reports, and the contrast against my minimum estimate of 800,000l. was really startling. But time, the great arbiter of all things, was not long in deciding who was correct, for in 18 months the Board spent a sum far above their total estimate, only to find themselves in much greater difficulties than when they started. Independent claimholders and outsiders were not slow to acknowledge that "Kitto was correct after all," and regretted that the executive were so pig-headed as not to follow my advice. But the Press of Kimberley, which had so grossly maligned me because I had the courage to write the truth about their shamefully-mismanaged though fabulously rich property never had the honesty to make any amends for the extreme malevolence with which they tried to injure me personally. But they have continued to write fathoms of articles excusing the blunders of the Government, and calling each successive catastrophe unforeseen, when six years ago I warned them, through the Government, that if they did not adopt certain measures they would be overtaken with the various disasters which have since practically overwhelmed them. They cannot complain that sufficient publicity was not given to my reports, because the Government first published them in the *Government Gazette*. They were then taken over by all the papers in the country. They were next published in a pamphlet by the proprietors of the *Daily Independent*, and sold readily at 2s. 6d. each; and I notice they have again been recently printed by Witherby and Co., 325a, High Holborn, and are selling at 2s. each. I have never been directly or indirectly interested in the publication of my own reports, but it is very evident that it pays someone to publish them or they would not do so. One principal reason for entering so carefully into details with regard to the proper mode of working the Kimberley Mine is that having proved my views—in the face of a most virulent opposition—to be the only correct ones, I feel it a duty to myself to place the matter clearly before the readers of the *Mining Journal*. It is not generally known, but it was nevertheless a fact, that in order to prove the correctness of my estimates for securing the Kimberley Mine I made the Mining Board a definite offer to complete the whole work for 800,000l.; but I stipulated that if after showing my plans to the Board they decided to adopt them in their entirety or in any modified form without giving me the contract they should pay me the sum of 4000l. Anything more liberal than my offer they never received, but the Board and their narrow-minded advisers were so keen that they took fright at the stipulation. "Don't reply to his letter whatever you do," said the Board's chief adviser. "He is only in for a catch, because if you only use a wheelbarrow, a shovel, or a nail, it will be some portion of his scheme, and he will claim damages from us for using his scheme in some modified form." It will show the character of the Board when I say they at once jumped at the idea, and professed themselves delighted at having escaped the stratagems of the wily Kitto. But singular enough one or two members of the Board had a friend who, after knowing what I would complete the work for, offered to do it for a few shillings less, and they, of course, accepted his offer. He never attempted to carry out his agreement; but almost as soon as the contract was signed he and some of his associates came to my house and offered to transfer the contract to me for a money consideration of rather large dimensions. I felt, after the treatment I had received, I could not work with the administrators of the Kimberley Mine, and therefore refused to have anything more to do with them or their mine. I think I have made it plain that one of the chief drawbacks to the proper development of the world-renowned Kimberley Mine is the maladministration of the Mining Board. I have been informed that recent legislation has materially improved the system under which the Board is elected; but it must under any circumstances take a long time to repair the mischief done by the old wooden heads.

The Kimberley diamond fields have always been infested with low gangs of thieves, but the Government are very much to blame; every facility is offered to scoundrels to enable them to steal diamonds, and I defy any person to point to another spot in the known world where thieving is made so easy as at the diamond fields. I hold that there should have been no town, hotel, or Kaffir grog-shop within at least 15 miles of those rich mines, and that any person found inside a certain proclaimed area should be liable to be searched by Government officials appointed for the purpose. But instead of the town being 15 miles away the mine is in the very centre of the town. Hundreds of thousands of loads of diamond soil are spread over thousands of acres of ground, for the purpose of being disintegrated; and streets of houses, occupied by honest men and thieves alike, wind in and out amongst the heaps of diamond soil. When I was there people had frequently to walk to their front or back doors over those heaps. After a heavy shower of rain the disintegration of the diamond soil was very rapid, and consequently a large number of diamonds were exposed. At such times the thieves had a merry time of it, and no person will deny that however honest a man might be if in entering his back door he saw a diamond worth 20,000l. staring him in the face that if he did not take it he would be considered almost too good for this wicked world. The above example is only one out of more than fifty that I could name where those who care to do so have equal facilities for helping themselves to other peoples diamonds.

Referring to this matter as far back as 1879 I said—"The present system is not only an eyesore, but is most prejudicial to the pecuniary interest of the claimholders, and is almost a curse in a sanitary point of view. At present the debris is tipped out in long narrow heaps that winds snakelike in and out amongst the dwelling houses and washing-floors, and in many instances afford ample shelter for any thief who wishes to try an experiment at his neighbours' expense by helping himself to a few bags of his neighbours' diamond soil. Kaffirs and Kaffirs' huts are mixed with Europeans, and hundreds of heaps of debris conceal the

most abominable filth at almost every turn. If fevers are not prevalent it says a great deal in favour of the climate." A great many persons were wroth with me for referring so strongly to this particular point, and for reasons best known to themselves they have persisted in living between the debris heaps near sundry washing-floors.

The only means for catching diamond thieves on the diamond fields is by a system of trapping, which is open to a great deal of abuse, but I must refer to this in the next issue.

COLLIERY ACCIDENTS—No. II.

BY A NORTHUMBERLAND MINER.

The boy who is to spend his life as a miner may, at the age of 12, be able to name all the seaport towns in England, and to give a good deal of information about foreign countries; he may also have the names of all the English kings and queens, and the dates of all the important English battles at his fingers' ends; but the one subject of which he is perfectly ignorant is mining. I do not mean that the boy should be taught mining in its theoretical aspect, but it is not too much to say that he should know something of the dangers which he is to encounter in the mine, and of the means of preventing them. The boy goes into the mine and a safety-lamp is put into his hand. If he never comes in contact with gas so much the better; but if he be suddenly enveloped by a body of gas, what course is he likely to pursue? His attention will be attracted by the strange behaviour of the lamp. His curiosity will be aroused, and he will probably be delighted at the explosions which occur inside the gauze; but the idea of danger will be foreign to his mind. Now, if a man were to take a safety-lamp in his hand and walk through a powder magazine, or stay and work in the magazine, and caused an explosion, what exclamation would be hurled on the head of that man, and how speedily the Legislature would take steps to prevent such a thing happening again. When a miner is working among fire-damp, even with a safety-lamp, the danger is much greater than in the case of the magazine. Powder is a solid, and cannot easily penetrate the gauze of the lamp, but fire-damp penetrates the gauze with as much ease as the oxygen which is necessary for the combustion. As soon as the fire-damp reaches the flame an explosion occurs, but does not pass through the gauze. The fire-damp enters the gauze so rapidly that the lamp is filled with a mass of blue flame. In a very few minutes the gauze will be incandescent, and the surrounding fire-damp will be set on fire, or perhaps the gauze will break before incandescence is reached, and the explosion precipitated. The safety-lamp, therefore, does not enable a miner to work among fire-damp, it only furnishes him with the means of escape. In the case of the boy we saw that the indications of danger given by the lamp were not understood. If by a miracle—because it would be nothing short of a miracle—the boy escaped with his life, he would, perhaps, understand the indications on another occasion. This is the way in which the miners become acquainted with the dangers which surround them. Small quantities of gas may be fired without causing serious injury to anyone; but the risk is great, especially in view of the experiments which have recently been made on coal-dust. Only the coal-dust theory can, I believe, explain many explosions which have occurred. It is not possible for miners to work, as I have already said, among fire-damp, even with safety-lamps. But it is possible and probable for the current of air to be heavily laden with fire-damp as it approaches the upcast. If the seam were a dusty one, and a small quantity of gas which had collected in a hole in the roof, or in a small goaf were fired, either accidentally or intentionally, the coal-dust would take up the flame, assisted by the gas in the air current, and the result would be one of those large explosions, which carry off so many lives. The solitary piece of information which exists among the miners about the behaviour of the safety-lamp among fire-damp is, that when fire-damp enters the lamp a blue cap is formed on the top of the flame. It was long before I could understand what this blue cap was like. I found by experiment that when a small quantity of fire-damp enters the gauze, a blue cap is actually formed, but it is visible only to a sensitive eye, and only then when looked for. Instead of being a service of protection to the miner, this blue cap theory is really a source of danger. I have heard scores of miners talk of the blue cap who had never seen it, and who imagined that so long as it was not seen there was no danger. These men believed that the blue cap would be as easily seen as the flame on which it would appear. As a matter of fact, it appears in the naked light as well as on the safety-lamp, and when seen and understood is a most useful indication of danger. If anyone is approaching a volume of fire-damp with a light, he will, as he approaches the edge of the gas, observe, if his eye is sufficiently sensitive, the blue cap. He has not yet passed the limits of safety, but further he must not go. Now, to a miner working at the coal, the appearance of the blue cap would mean that there was a considerable proportion of fire-damp in his place; that it was not explosive; but a very slight increase of gas would render an explosion imminent; and that if the gas existed throughout the whole pit the same proportion, and the pit were a dusty one, an explosion might be expected any minute. But, as I have said, a theoretical knowledge of mining is unpopular, and the miners are not trained to detect and understand the meaning of the blue cap. I will suppose that a miner found himself enveloped by a large quantity of fire-damp, and that he fully understood all about the blue cap, and was aware of the fact that the gauze would fill with flame as soon as the limits of safety were passed. I am assuming that this knowledge has been imparted to him by some one else. The question that arises to his mind as soon as he discovers his danger is, how is he to extricate himself. This question has probably never before occurred to him. In his haste to escape he is almost certain to move the lamp about quickly, and when he does that the flame will travel through the gauze, and the explosion will occur. If he were a clever miner, and remained perfectly calm among the danger he might succeed in covering up the lamp, and thereby cutting off both the oxygen and fire-damp, and extinguishing the flame; or he might, by placing the lamp on the floor of the mine, avert the danger, because fire-damp, being lighter than atmospheric air, lies next the roof; or he might throw something round the lamp to prevent the flame from passing through the gauze, and beat a hasty retreat to a place of safety. But this could only happen if the miner were clever and collected. The miner who made a slight mistake would lose his life, and, perhaps, the lives of hundreds of others.

So far as the question of colliery explosions is concerned, I think I have shown that a great reform is needed among the miners, especially among the underground officials. I shall be told by most miners who read these communications that there should be no need for miners to acquire all this knowledge of the dangers of the mine; that the one sure way to prevent explosions is to send such a current of air through every mine as will thoroughly dilute the gas and render explosions impossible. I agree that the ventilation ought to be good—much better than it is in some districts. But I would urge that the first persons who ought to be able to detect danger in a mine are the miners. If the ventilation is insufficient the miners should be the first to know it, and if they realised the extent of the danger in which defective ventilation places them,

it does not occur to me as possible that mines would be allowed to be worked without adequate ventilation. There was a time in which the miner who discovered danger in a mine and had the courage to speak about it was dismissed, and had the greatest difficulty in finding employment elsewhere. We live in better times; at any rate the miner who draws attention to such dangers incurs less risk than was incurred ten years ago. But even if two or three miners did discover danger, and were dismissed for calling attention to it, what lesson does this fact teach the miners? It shows that the great mass of the miners employed in the mine were so indifferent to the danger that they did not realise it, and perhaps did not believe it existed. But if the whole of the miners realised the danger as vividly as the two or three did, would it be possible for the whole of them to be dismissed. It is certain that the employers would be compelled to take steps at once to ensure the safety of the mine, and it is very probable that the danger would never be permitted to assume such serious proportions. No hard and fast rules for the ventilation can be laid down. We know how much air is required for so many men and horses, and we know all about the power required to overcome the friction, and the quantity of gas given off varies considerably. The ventilation which would suffice for a mine which gave off a small quantity of gas would not suffice for another of equal size, but which gave off a large quantity. Moreover the friction encountered by the current is not easily calculable. The main airways can be easily measured, but no inconsiderable friction is encountered by the air which circulates behind brattices and pillars. The measurements of air taken near the upcast do not give true results, because only a small proportion of the air circulates through the whole of the workings, no small proportion being wasted at every split or turn, and this wasted air does not complete half the journey, but is reckoned in with the air which does. No matter what the Legislature may do for the prevention of accidents, I fully believe that the true solution of the question lies with the miners themselves. In my next paper I shall deal with accident by falls of stone and coal, and I shall later on make a suggestion about inspection which I hope will be worthy of the consideration of miners and employers and legislators; but I shall also endeavour to show what course the miners should pursue.

FOREIGN MINING AND METALLURGY.

Continued depression is the order of the day in the French Iron Trade. The forges of the Nord are not selling at the excessively low rates accepted by the rolling-mills in the neighbourhood of Paris, but the latter can nearly keep pace with the consumption of the capital, and they are keeping the price of merchants' iron down to 5l. 12s. per ton. The German iron trade has continued in a languishing state, without any material variation in prices. A contract for 50 current miles of steel rails has been taken by the Friedenshutte Works at 5l. 10s. 10d. per ton. A second lot of 6890 tons of fish-plates has been carried off by Ruhrort at 6l. 5s. per ton. Laurahutte has taken 26,760 bolts at 8l. 15s. per ton. In the first half of this year the forges of the Rhine, Westphalia, the Sarre, and the Moselle produced altogether 134,467 tons of bars, the sales effected in the same period having been 133,586 tons. The orders in course of execution at the close of the half-year amounted to 124,750 tons. In consequence of a general dullness in affairs the price of bars receded in the four districts named from 5l. 8s. to 5l. 10s. per ton in January to 5l. 5s. to 5l. 4s. per ton in July. The markets have within the last few weeks acquired, if anything, a still more unfavourable tone, there being a disposition to accept the lowest rates even in the case of extremely small transactions.

The Belgian Iron Trade remains in much the same state. Feebleness is the general characteristic of the situation, and there appears to be little immediate likelihood of a change for the better. Orders continue to come to hand not to a sufficient extent to thoroughly assure the future, but still plentiful enough to keep most of the works going. Prices continue extremely low, and new transactions have been carried through with difficulty. The North-East Swiss Railway Company has invited tenders for 2000 tons of steel sleepers. This step has been taken probably because experiments made with metallic sleepers in Holland have shown that the renewals required amounted to less than 20 per cent. in 12 years. The value of a metallic sleeper condemned as past service is also much more than that of an old wooden one. Steel sleepers will, of course, be found more durable than iron ones, and may possibly exert an important influence upon the future maintenance of permanent way. The Council of Administration of the Acoz Forges Company reports the realisation of a profit of 4570l. for the financial year 1884-5. This profit was, however, more than wholly swallowed up by the depreciation which occurred during the year in the value of the stock of goods on hand. The company's Musson furnace was lighted successfully last year. One of the difficulties of the undertaking is stated to be the want of an adequate working capital.

There is very little new to communicate with respect to the Belgian coal trade. Deliveries have fallen off except as regards household coal, for which there is beginning to be an enquiry for the autumn and winter. Coal for metallurgical purposes remains a good deal neglected; industrial coal has also been in little demand, and is likely to remain so for some time to come. In the week ending July 27, the number of trucks carrying coal and coke which passed over the Belgian State Railways was 14,760, as compared with 15,918 in the corresponding week of 1884. The extraction of coal in the French Department of the Nord in the first half of this year has just been returned at 1,678,938 tons, as compared with 1,587,067 tons in the corresponding period of 1884, and 1,899,380 tons in the corresponding period of 1883. The production for the first half of 1884 was reduced, it will be remembered, by a great strike in the Anzin Collieries, but comparing the extraction for the first half of this year with that effected in the first half of 1883, we have a reduction of 220,648 tons, or more than 12 per cent. This considerable curtailment in the production occurred principally at the Anzin and Aniche Collieries. The coal markets of the Nord have naturally experienced the effect of the generally depressed state of affairs, and important reductions have taken place in prices. Coal is being offered in Westphalia at very low prices, with the view of inducing consumers to lay in supplies.

GERMAN MINING STATISTICS.

The following Table shows the production of the mines and iron works of Germany and the Duchy of Luxembourg in 1884:—

	Production: Tons.		Price per Ton.	
	1883.	1884.	1883.	1884.
Coal	55,943	57,190	5-22	5-25
Lignite	14,500	14,850	2-69	2-65
Cast-iron	3,470	3,600	53-27	47-92
Zinc	116	125	288	272
Lead	90	95	241	213
Copper	18	18-8	1,359	1,207
Silver	235	248	—	—
Iron	1,573	1,590	147	133
Steel	1,060	1,140	159	145

It will be observed that although there has been an increase all round in the production there has been an equally general fall in prices. Efforts are being made by some of the coal owners in the basin of the Ruhr to regulate the production during the forthcoming 12 months.

THE BANKRUPTCY ACT—A SATISFACTORY REPORT.

The second report of the Board of Trade on the Bankruptcy Act of 1883 has just been presented to Parliament. To it is prefixed an introduction, in the form of a letter from Sir Thomas Farrer to the President of the Board of Trade, in which it is remarked that in last year's report it was possible to do little more than describe the initial arrangements which had been made for bringing the Bankruptcy Act into operation, and to add such remarks as the Inspector-General was able to make concerning the first few months of its working. The Act has now been in full operation for more than 18 months, and a more complete account of the arrangements made for working it, as well as further details concerning its operation, can now be given. After making some observations on the general operation of the Act, and on the judicial decisions affecting the administration of the Act by the Board of Trade, Sir Thomas Farrer goes on to say that "when the Bill of 1883 was introduced it was understood that bankruptcy administration was to pay for itself, and that no additional charge was to be laid on the public Exchequer in consequence of the Act." That this result has been achieved is shown by an account which has been prepared by the Treasury, and will be laid before Parliament. From this account it appears that there is a surplus of over 14,000*l.* for the year. But it must be borne in mind that "since the date of the above account some additional expense will have been incurred, and that the scale of fees has been revised." With regard to the new scale of fees, Sir Thomas says:—

The scale of fees originally adopted provided for a charge of 6 per cent. on all assets realised by official receivers. This gave rise to some misapprehension. It was suggested that the Board of Trade and its officers might have some interest in forcing realisation of estates, and the Lord Chancellor and the Treasury have consequently, on the recommendation of the Board of Trade, agreed to adopt a new scale of fees, in which the charge on realisations is materially modified. By the new scale, which came into effect on July 1, instead of there being a uniform charge of 6 per cent. on realisations, the charge of 6 per cent. is now made only on amounts under 500*l.* Above that amount the scale is as follows:—Next 500*l.*, 5 per cent.; next 2000*l.*, 4 per cent.; next 2000*l.*, 3 per cent.; next 5000*l.*, 2 per cent.; above 10,000*l.*, 1 per cent.

On this revised scale we may observe that it does not seem likely to affect the receipts from fees much at present, seeing that, according to Table VI. (p. 38), there were in 1884 eight estates with 7380*l.* of assets, on which less than 6 per cent. would have been payable if the new scale had been in force, the total number of estates being 574, with assets to the amount of 68,636*l.* Sir Thomas Farrer goes on to observe:—

Complaints have been made that the existing scale of costs throws difficulties in the way of employing the solicitors for the debtor and for the petitioning creditor, and of paying them properly, although they might do work useful to the estate.

The late Lord Chancellor was of opinion that the matter should be considered, and was in correspondence with the Incorporated Law Society of London and with bodies representing solicitors in the provinces on this subject. Some delay has been occasioned by the recent change of Government, but it is hoped that it may be possible to deal with the subject at an early date.

The question is one of considerable difficulty and delicacy. On the one hand it is desirable not to discourage the employment of solicitors and accountants when their employment is really necessary or useful to the estate. On the other hand it is essential not to encourage their employment when their services are not required. To encourage their employment in such cases would be to reintroduce an evil which the recent Act was intended to prevent.

As regards judicial arrangements he remarks that these are, of course, independent of the Board of Trade, but that substantially little or no change has been made in them as they existed under the Act of 1869. With regard to the Bankruptcy Estates Account, he says:—

On the passing of the Bankruptcy Act in August, 1883, an account was at once opened at the Bank of England in accordance with the requirements of section 74, in order that trustees under the former Acts might be enabled at once to comply with the requirements of Section 162, by paying over the balances of moneys remaining in their hands to the Bankruptcy Estates account. The directors of the Bank of England have co-operated heartily with the Board of Trade, and although some difficulties arose, and some complaints were made at first, they were speedily surmounted, and the machinery for the receipt and payment of bankruptcy moneys is working easily.

The work of getting in outstanding assets under the section 162 of the Act of 1883, with reference to the payment of unclaimed dividends and undistributed funds in the Bankruptcy Estates Account, were explained in some detail in the previous report. The influx of funds from trustees who voluntarily recognise their liabilities under the provisions of the section has largely diminished, and with a view of bringing pressure to bear on trustees who have failed to make returns lists of cases and names of trustees have been obtained from the Court files of the London Bankruptcy Court and of the principal County Courts for a period of five years. So far as the pressure of work under the new Act, and the limited staff at disposal have permitted, the task of requiring trustees whose names have been thus ascertained to furnish returns has been proceeded with. This work is still in progress, and steps are being taken to utilise the local knowledge of official receivers in some of the larger centres for the purpose. It is to be observed, however, as indicating the character of a considerable class of trustees under the Act of 1869, that a large number of circulars issued to trustees whose names appear in the Court lists have been returned through the Dead Letter Office. Also in cases where the Board of Trade have taken steps towards a more searching investigation and audit of accounts it has in several cases been found difficult to effect service of the necessary legal notices upon the trustees concerned.

In conclusion Sir Thomas Farrer remarks:—
It would still be premature to come to any decided conclusion concerning the general results of the Act, or concerning its effect on the trade of the country and on commercial morality. Some time must elapse before the administration of the Act can be perfected, and much more before its full effect can be judged of. But so far as the facts stated in the above report and in that of the Inspector-General make it possible to form an opinion, there appears to be no reason to think that the Act will disappoint the hopes of its promoters.

Our experience of the new Act is entirely favourable. Bankruptcy matters are cleared off with an expedition entirely unknown under the old system, and creditors who take the trouble to comply with the formal regulations of the Government department have every reason to be satisfied with the promptness with which assets are realised and distributed. We cannot help thinking also that the Act has exercised a most satisfactory influence upon traders and others who have hitherto systematically carried on business at the sole expense of those dealing with them. A strong proof of the abuse identified with the old system is to be found in the significant fact referred to in the report, that a number of trustees holding trust funds have strangely disappeared since the operation of the new Act, which requires them to pay into the Bank of England unclaimed balances.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Wren and Co., of the Stock Exchange and Finch-lane, has been:—Bahia, 25; Bombay, 6½; British, 42½ to 43½; Buenos A. (New), 13½ to 14½; Commercial (New), 200; ditto, Four-and-a-Half per Cent. Debentures, 118 to 119½; Continental (New), 27½; European, 15½; Gas, A, 240 to 241½; ditto, C, D, and E, 243; H, 157 to 158½; Imperial Continental, 209 to 214½; Monte Video, 16½ to 17½; Rio de Janeiro, 23 to 23½; South Metropolitan, A, 280 to 281½; ditto B, 235 to 237½; ditto, Perpetual Five per Cent., 135½. Gas stocks not much changed.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Wren and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Atlas, 15½; City Fire, ¾ to ¾; Commercial Union, 15½ to 15¾; Fire Insurance, ¾; Globe, 1½; Indemnity Marine, 14½; Lancashire, 4½; Law Life, 107½; London, 4 to 5; London and Provincial Marine, 3½; Marine, 27½; North British and Mercantile, 30½ to 31; Ocean, 5½; Rock, 7½; Royal, 295; Sun, 428 to 430. Insurance shows little improvement.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. Wm. Abbott, of Tokenhouse-yard, are given in tabular form in the Stock and Share List page of the Journal.

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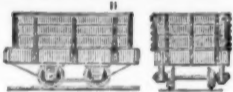
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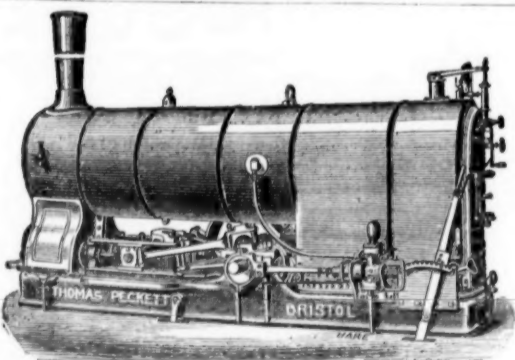
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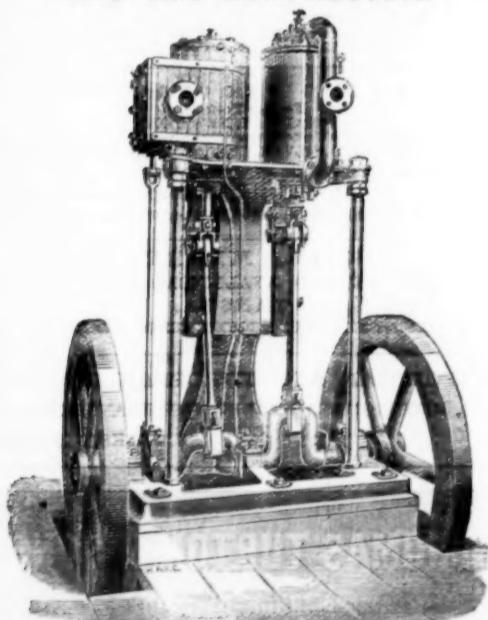
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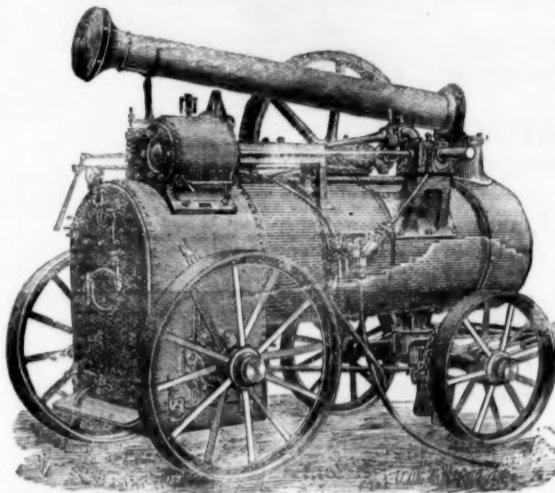
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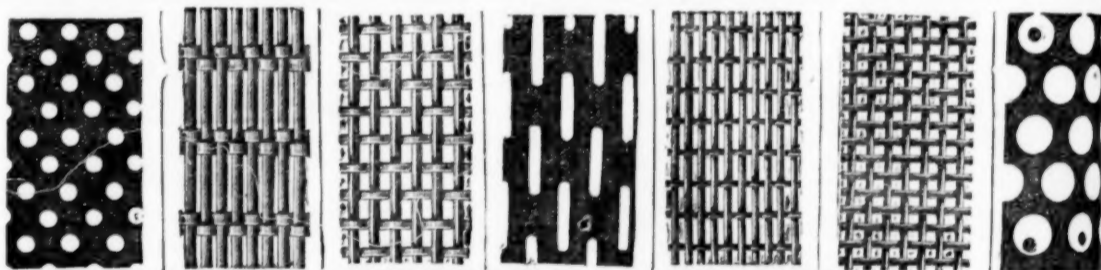
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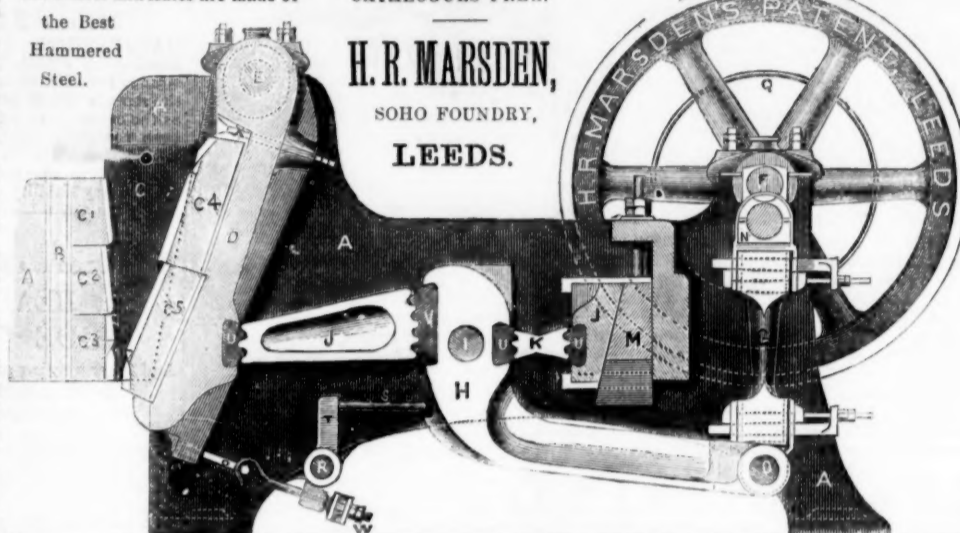
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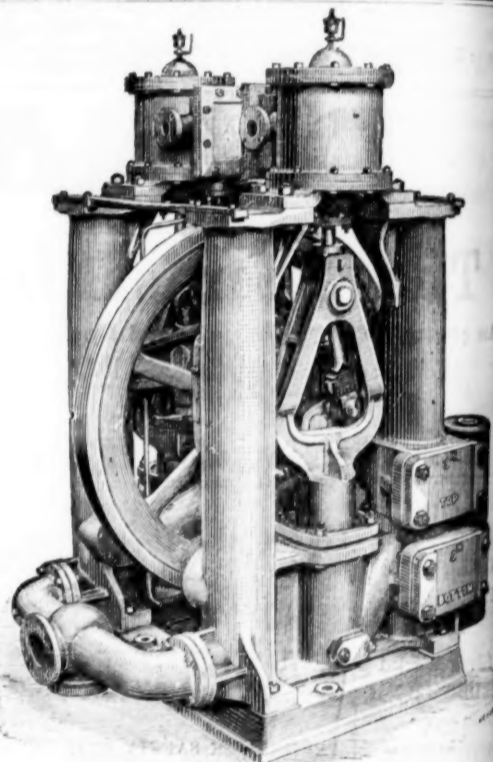
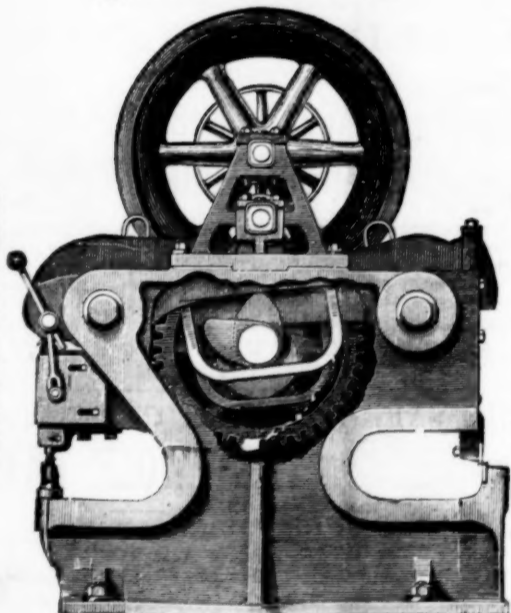
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